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A Lecture
ON
PSYCHONEUROSES.

Delivered at the Medical Graduates' College and Polyclinic on June 12th, 1911.

BY E. D. MACNAMARA, M.D. CANTAB., F.R.C.P. LOND.,
PHYSICIAN TO THE WEST END HOSPITAL FOR NERVOUS DISEASES.

GENTLEMEN,—It is only within a comparatively short term of years that the large class of maladies with which I propose very briefly to deal has engaged the serious attention of the profession. That attention has been attracted not only by the patient labours of many neurologists and psychiatrists, but has been more roughly roused from without by the exploitation of mental therapy by so-called "faith-healers" of many denominations. It is perfectly true that from the remotest dawn of history there is abundant evidence of the existence of diseases which were not susceptible of cure by drugs or other physical agents, but which were cured by some procedure directed towards making an impression upon the mind of the patient. It is further true that except during recent decades such diseases have for the most part been rather contemptuously ignored by the profession, with the not unnatural result that a large field of activity has almost voluntarily been abandoned to the charlatans. But never before has there been the same amount of organised activity on the part of that large body of persons who regard themselves as either innately qualified or divinely inspired to treat disease. Nor are such activities confined to the practice of the unscrupulous upon the ignorant and unwary, but, on the contrary, are widespread among highly educated persons who on a basis of mysticism erect large structures compact of what they call religion and philosophy. It must fall within the experience of many of us to lose our patients to the exponents of such systems, and it is perhaps not too much to say that the remedy lies largely in our own hands.

To affirm of certain groups of symptoms that they are "imaginary" or that they are "merely nervous," and that therefore they must be ignored, or that they can, on the other hand, be cured by a bottle of this or by a course of that or even by surgical intervention, is, from an academic point of view, to put aside the investigation of a large series of most important problems, and from a practical point of view to drive our patients into the arms of those who dogmatise the more vehemently as their ignorance is the more profound, but who at least empirically know that the procedures in which they believe themselves to be adept are at times capable of effecting cures. I believe I am right when I say that there are but few, if any, sects of those who may generically be called faith-healers whose members deny the services of a surgeon in the case of, let us say, a compound fracture of a leg. But a larger number are prepared to deny the services of a physician when the morbid processes are concealed by the superficial structures, and all are prepared to affirm that the services of a surgeon and physician are alike useless and are even nocuous when the symptoms are of a so-called nervous character. The much-abused adjective "nervous" covers many large categories of disease, and in this special connotation generally means the exhibition of the milder mental abnormalities. Such affections are, however, not the only manifestations of psychic disorder, and, in fact, there is no system of the body which may not show symptoms that are directly dependent upon an improper performance of psychic functions. It is from this enormous group that is, for the most part, drawn the class of patients who are benefited by the methods of the faith-healer, whether he be a follower of current cults or an exponent of "higher thought," "newer thought," or "Christian Science." Some study of these phenomena and of the methods which may be used in their treatment will convince one of the profundity of the problems involved, and at the same time of the importance of proper treatment. Merely to enumerate some of the affections will suffice to indicate the wide range covered.

SIGNIFICATION OF TERM "PSYCHONEUROSIS."

It is not altogether easy to define the term "psychoneurosis." A neurosis is an affection of the nervous system in which the anatomical lesion is unknown, and similarly a psychosis is an affection of mentality in which the anatomical lesion is unknown, but such definitions, though convenient, are inaccurate and can only be regarded as conventional and provisional, for to distinguish between an affection of mentality and an affection of the nervous system is often plainly beyond our power, since we can demarcate no boundary where we can say that here mentality ends and here the functions of the nervous system begin. As an example of a disease which we may place in the category of the psychoses I may mention maniacal-depressive insanity, and as an example of a disease which we may place in the category of the neuroses, I may mention those neuralgias which are not accompanied by any structural nervous change. Both the psychoses and the neuroses tend with the advance of pathological knowledge to lose members of their categories to the category of organic disease, but the former nevertheless remain up to the present as a formidably large group. The psychoneuroses are not, as their title might lead one to expect, affections combining the symptomatology of the psychoses with that of the neuroses, but, in fact, form a sub-group of the psychoses in which the clinical phenomena are non-mental, but in which those phenomena have been produced by incidents in the mental life of the patient. The patient, perhaps, does not complain of his "nerves" at all, nor does he always suspect that his nervous system is at fault, but rather he complains of some other system—for example, the gastro-intestinal or circulatory. On the other hand, the patient may ascribe his symptoms to his nervous system, but energetically repudiate the idea that his mind is affected. The outstanding characteristics of these affections are that the symptoms are brought into existence and persist in the absence of any structural alteration in the organ or organs apparently at fault, and that the symptoms date from a period of short or long duration, during which adverse psychic conditions were experienced. To put it quite briefly, the troubles, no matter where they are situated, are of psychic origin. It should be very distinctly understood that these symptoms are neither imaginary nor invented. Symptoms can, no doubt, be invented, and not infrequently are, but persons presenting invented symptoms pass into the categories of malingering or mythomania. Similarly, symptoms can be imagined and not infrequently are, but persons presenting imaginary symptoms pass into the category of hypochondriasis or a form of delusional insanity. In the psychoneuroses symptoms which are neither invented nor imaginary are present, and can often only be distinguished from symptoms of organic origin by taking the etiological factors into account—that is, by a consideration of the psychic stresses to which the patient has been subjected.

SYMPTOMS CONNECTED WITH THE RESPIRATORY SYSTEM.

In the case of the respiratory system we not uncommonly meet with symptoms which appear to be dependent upon psychic causes. For instance, in the case of the larynx, a man, part of whose profession in life lies in the exercise of his vocal cords, may complain of aphonia, partial or complete, arising in the course of his duties. On examination no abnormal physical signs can be found, and the aphonia only occurs at irregular intervals, commences suddenly, and passes away rapidly. If the history of the patient be minutely examined it will in all probability transpire that the affection dates from an attack of what was no doubt laryngitis, and it will probably also become apparent that at the time of the laryngitis the patient was worried by having to give up his work and is still haunted by the fear that he may have to give it up again. A correct diagnosis having been made, it is likely enough that the patient will be dismissed with a prescription and the assurance that he need not be alarmed as to the future of the affection. Frequently such treatment suffices, but not uncommonly the attacks of aphonia persistently recur, the patient seeks further advice, is again and again disappointed with the result of treatment, and finally, impressed by the glamour of some advertisement or moved by the solicitations of friends believing in some particular nostrum, gives himself to the charlatan or the faith-healer and by him is perhaps relieved

of further trouble. A case such as this illustrates the method of origin of a large number of the psychoneuroses. There has been some slight and unimportant organic affection: this was accompanied by worry due to the inability of the patient to carry on his work, and, though of itself of small moment, apprehension of a recurrence has remained and shows itself at times in specimens of what would happen if, in fact, the affection were to return. In the case of a patient whose malady is of the larynx or of the respiratory passages in general, the association of troubles of these regions with the idea of cold being very common, it is quite likely that fussy precautions against the supposed effects of cold will be much in evidence. Among such persons we find those who shelter themselves from cold to such a degree that life becomes one round of searching for and avoiding possible draughts or of varying the number of layers of their clothing with the level of the thermometer; or those who, to the detriment of their digestions, suck cough lozenges all day and all night, or who, to the annoyance of bystanders, alternately clear their throats and blow their noses throughout their waking hours. Some varieties of asthma also appear to be of psychic origin—that is, that the first attack occurred at the time of, or shortly after, an unusual emotional state, and that subsequent attacks have occurred during, or shortly after, subsequent emotional states.

GASTRO-INTESTINAL CASES.

The effect of states of mind upon the functions of the gastro-intestinal tract is well recognised, and knowledge of these effects has in recent years been elevated, chiefly by the work of Pauloff, to a scientific level. Many accustomed to slight degrees of dyspepsia after their ordinary domestic meals are astounded at the digestive capacity of their stomachs after the copious intake of some enjoyable public dinner, while others of habitually good digestive capacity find their dinners spoiled and their digestions temporarily deranged by the honour of having to deliver a post-prandial oration. Among the neurasthenic digestive troubles are so frequent and so marked that etiological theories have been erected ascribing the neurasthenia to the dyspepsia rather than the dyspepsia to the neurasthenia. It is not at all uncommon to hear that certain articles of diet make certain persons sick, and it is difficult, so digestible are some of these articles, to account for the apparent irritability of the stomach. For instance, a patient was for years nauseated by honey, or, perhaps, it would be more correct to say felt nauseated when he saw honey on the table. This dated from some occasion in very early childhood when the patient was sick and spat up a streak of blood after a meal at which he had had honey. The patient was under the impression that he had some special idiosyncrasy which prevented him from digesting honey. After the probable genesis of the idea had been explained to the patient and the improbability of honey disagreeing with so healthy a stomach as his had been insisted upon, he was no longer troubled, and now takes honey from time to time as opportunity affords without the slightest feeling of nausea. Another patient was, in the middle of a dinner party, taken with nausea and had, to his embarrassment, to leave the table. There was no obvious cause for the feeling, but subsequently for some years, although the patient's powers of digestion were good, he was unable to dine out at a mixed dinner party, for to do so invariably eventuated in a feeling of sickness coming on at the table. A third patient, a girl, complained of abnormal sensations chiefly of a "sinking character" occurring from time to time in the epigastrium and which she put down to indigestion. It seemed difficult to ascribe the phenomena to the stomach, but some little time was spent in endeavouring to treat the disorder as though it were of gastric origin. At length, psycho-analysis being employed, the fact was revealed that the time of the first onset of the sensations was coincident with a disappointment in love. The possible origin of the sensations, quite unsuspected either by the girl or by her medical attendant, was explained to the patient and the symptoms rapidly disappeared. These cases of very homely uncomplicated symptoms serve to illustrate psychoneurotic processes affecting the stomach in which the cause seemed plain.

But many cases are by no means so simple, while the symptoms may be of great gravity. Indeed, the clinical picture is often such that it is hard not to believe that serious organic disease is present. Pain in all the forms in which it occurs in dyspepsia of other origin may be complained of, and may be distending or burning, thoracic or abdominal, coming on immediately after food or being delayed for some hours. Stasis and dilatation may actually occur and be in part dependent upon atonicity of the gastric muscles, a condition presumed in these muscles as part of the general atonicity inferred in its turn from the atonic condition of muscles more readily observed. Parenthetically, it may be noted that the atonia of the muscles is seldom if ever of the degree of such atonia as we meet with in tabes dorsalis, and, indeed, is often assumed rather from the statements of the patient than observed from the condition of his muscles. Stasis may also be due to alteration of the character of the gastric juice, and we have every reason to suppose that the latter varies considerably with mental states. The gusto with which a healthy and happy individual sets himself to his meals promotes the proper amount of flow of the proper sort of juice. On the other hand, we find the individual who has been the subject of some depressing emotion firstly losing appetite, then exhibiting those dyspeptic symptoms which follow upon alteration—qualitative or quantitative, or both—of the gastric juice, and later still showing signs of malnutrition consequent upon insufficient feeding. Consider the not infrequent circumstances in which dyspepsia is brought about in the case of the individual who lives by himself. There is nothing probably in his daily work to promote appetite, for it is likely enough carried on mechanically in depressing surroundings and in a foul atmosphere. To each meal such a person sits himself without appetite. His solitary repasts are not lively entertainments, and he regards them as functions to be as rapidly hurried over as possible. He discourages rather than encourages any desire for food that may be present and gradually reduces the time he takes over his meals. Under these conditions an absence of proper psychic stimulus vitiates the secretions, dyspepsia occurs, and the patient further reduces the quantity of food he takes to avoid the discomfort or pain which follows upon taking it. A vicious circle is now entered upon and the patient may eventually present all the symptoms of serious organic disease.

CARDIO-VASCULAR SYMPTOMS.

The heart is even more generally recognised to be affected by psychic states than is the stomach, and since the dawn of history has been regarded as bound up with the emotions and even as their corporeal site. Tachycardia is an almost invariable accompaniment of the more powerful emotions, though the most powerful of all are, at least in some persons, accompanied by bradycardia. With the tachycardia may be associated palpitation, and there are cases in which rapidity of the heart's action and the abnormal sensations of its presence suggest to the patient that he is the subject of heart disease. It is, of course, unlikely that a single attack of such symptoms occurring at the time of some emotional disturbance would create the idea of cardiac disease, but if the symptoms recur whenever the attention of the patient is called to the cause of the original emotion it is not unlikely that the idea will arise. Here may be mentioned the exceedingly common vascular phenomenon of blushing. Commonly associated at certain ages, and for the most part in the female sex with certain emotions, it may last on beyond the usual age limits, and in so doing is liable to become a serious source of annoyance and may even make of the patient an embittered recluse. Not infrequently the origin of the habit is found to lie in an association between blushing and lying or masturbation, suggested in the first instance to the patient by a school fellow or by a quack advertisement.

DIAGNOSIS.

It would be very easy to multiply instances of the occasionally unfortunate effect of the mind upon the body, for there is not one of the systems of the latter which is exempt from such effects. I have given examples of cases in which the respiratory, the alimentary, and the cardio-vascular systems have been affected, but the urino-genital and the nervous system are by no means less frequently perturbed. The nervous system I have purposely disregarded, since many of its abnormal manifestations are commonly recognisable as of nervous or psychic origin, whereas the connexion between a chronic dyspepsia and a preceding psychic event is much less obvious, and my wish has been to emphasise the fact that many abnormal somatic phenomena,

affecting systems other than the nervous, have a psychic source. The correct diagnosis of the psychoneuroses is naturally of the first importance, for to mistake functional disease for organic disease or *vice versâ* is entirely to vitiate therapeutics. It is therefore necessary carefully to examine the patient in order that the abnormal physical signs of organic disease may be excluded altogether, or that it may be determined that the functional symptoms complained of by the patient are out of proportion to the extent of the organic basis upon which they are founded, for it should always be borne in mind that upon organic disease of small moment in itself may be erected a formidable functional superstructure. To some trifling deformity, let us suppose a deflected nasal septum, a patient's entire attention may become devoted. Repeated medical consultations and the reading of medical books serve to further fix the attention of the patient upon the local condition and spur him to hunt for and to discover symptoms of which hitherto he has been unconscious, while constant treatment so much occupies the patient's time that he has but little leisure for anything else. It is manifest that in such a case though the organic basis of the affection cannot be denied, yet that the psychic influences are such that a comparatively trumpery matter has been exalted to a level at which it dominates life to the exclusion of both business and pleasure. So also it may be that the symptoms complained of may be traced to the existence of some organic disease which has long since passed away, but in which the character of the symptoms became so impressed upon the patient's mind that they continue to have an existence not now based upon structural alteration but upon an established psychic habit.

The examination of the nervous system having been completed and the presence of organic disease having been excluded, so far as such exclusion is possible, the mental life of the patient should be inquired into, and it will be found in a large number of cases that the symptoms commenced at the time of or shortly after the occurrence of a period of emotional stress. Without any history of organic disease it will appear that the abnormal phenomena were first noted during a time of personal, domestic, or business worry, or, with a history of organic disease, that that disease was accompanied by circumstances of a harassing character. Over and over again we find that among women the history commences with the nursing of a near relative during an illness, and among men that the symptoms commenced at a time when the patient's prospects in life and the position of his family were put in jeopardy by loss of employment, or threatened loss of employment, from illness or some other cause. At times it happens that the most careful inquiry fails to elicit anything of a psychic nature which can be regarded as a possible cause of the illness, and it is in these cases that the more subtle methods of psycho-analysis may be put in practice.

PSYCHO-ANALYSIS.

Psycho-analysis is the modern term applied to the systematic exploration of a mental field. In part it consists in the methods ordinarily used when we desire to know the content of a person's mind—that is, observation of his conduct in various circumstances, questioning and cross-questioning, and in most cases, if we can rely on the *bona fides* of the person examined, such methods are sufficient. There are, however, cases in which, though the patient believes that he has wholly and with candour unbosomed himself, yet the all-important circumstances of the past have been submerged in his mind by the current of later events and have passed out of the present field of his consciousness, but though submerged in this way the impress of these circumstances has not ceased to act upon the current above, and occasionally obtrudes itself in the shape of phenomena of which the patient complains.

We are very much accustomed nowadays to hear of, and to read of, the "subconscious," and it would appear that the less we know what we mean by the term the more we are apt to talk about it—at any rate, it provides a *locus standi* on which charlatans of all kinds purport to freely move and where, no doubt, they find their living. That which we may premise about such a mental level, whether we choose to give it such a name and to relate it to the conscious or not, is that it appears to be the region of the automatic psychic reflexes. Just as the limbs become educated to perform certain movements, so does consciousness as to the detail of the movements fade away, and it is similarly the case where psychic performances are concerned. We commit a piece of poetry to memory, and while so doing we have at first more or less difficulty in repeating the words correctly, but later on with no effort at all the words come to our lips when the idea which they represent or with which they have associations is roused. At times we are astonished that the words should arise in us at all, for so long have we been unconscious of them, while in other cases the words are only heard when he who utters them is delirious or in some other abnormal state. But not only is it the case that things committed with effort to the memory may subsequently arise in consciousness without effort, but it is further true that past events which there has been no effort to remember, and perhaps, indeed, about which there has been an effort to forget, may crop up either as recollections which are recognised as such or as phenomena which are not connected in any obvious way with the occurrences of long ago. A woman, for example, in early adult life is subjected to the stress of a love affair accompanied by circumstances which her education has taught her to regard as discreditable, and in which social convention demands that she should hide the expression of her emotions. The stress over, she endeavours deliberately to erase the writing on that page of her memory which recorded it, and to a large extent she succeeds, but, nevertheless, the suppressed emotion, having missed the usual channels by which it ordinarily becomes declared, ferments, to use a very crude metaphor, and sooner or later shows itself in the phenomena we associate with psychasthenia, neurasthenia, and hysteria. It is in the endeavour to trace the connexion between the symptoms of these and kindred affections and some preceding event in the patient's life that the subtler methods of psycho-analysis, such as the study of time-reactions, the examination of the trend of the patient's conversation when he is permitting it to run its course without voluntarily controlling it, examination under hypnosis and a critical analysis of dreams, have been developed under the stimulating influence of Freud and his fellow workers.

But the pursuit of the mental trail is not merely of academic interest, for it is hoped, when the lair of the suppressed emotion is at length reached, when the causal connexion between it and the symptoms has been traced, when an explanation of the connexion has been made, and when possibly an expression of the emotion has been given vent to by the patient, that relief may be afforded. The method is not unlike the time-honoured one of the confession of sin, while self-examination is assisted by eliciting that from the patient which has long since passed from his consciousness. I am not here advancing a personal opinion that it is always desirable to dig where much has been discreetly buried, but it remains nevertheless true that there are cases in which a resurrection of the past is the only method whereby we can hope for relief of present symptoms.

OTHER PSYCHO-THERAPEUTICAL MEASURES.

Fortunately, for psycho-analytic processes often take up much time and require an infinity of patience, many patients can be relieved of the sorts of symptoms of which I have been trying to give a short desoription by simpler methods. From the earliest times the personal influence of the physician has been recognised as being of great importance, and it is hardly too much to say that that influence is of as much value as are most of the physical agents in his armamentarium. Most ailments in an average man's or woman's life are of the minor order which tend to get well without therapeutic assistance, and in such cases progress to recovery is often accelerated rather by the physician's attitude to his patient than by material therapy directed against the morbific agent. Even in the more serious illnesses, which come sooner or later, the physician may produce an effect upon the course of the disease by encouraging the patient, or, if his prognosis has to be a bad one, by endeavouring to inculcate the virtues of patience and resignation. All of us know that if a patient has pluck he has a better chance than if he caves in at once, and it is our duty to elicit or develop in the patient that frame of mind which will put him in heart to endure his ills. If this be so even in the case of those affections in which the cause is micro-organismal or otherwise organic, so much the more may we expect similar beneficial results when the cause is either wholly or in part psychic.

We are accustomed nowadays to the term "suggestion."

Some use it as a euphemism for hypnosis, since the latter is still held by some to have a sinister connotation. But all that suggestion really means is the presentation of an idea or set of ideas to another for his acceptance. The presentation may be made in various ways and under various circumstances. It may be made, for example, under a deep degree of hypnosis when the patient is artificially though soundly asleep; or it may be made, after the patient has been elaborately prepared by the manœuvres usually practised in preparing the higher degrees of hypnosis, when the patient is in a drowsy state though not soundly asleep; or it may be made as a direct appeal to the good sense of the patient; or, lastly, over a prolonged period of time by the laborious process of educating the patient out of a set of faulty ideas into a set that is healthy. In any case the first point is to gain the confidence of the patient, and the second, by one or other of the methods just mentioned, to neutralise the ideas which by previous examination we have reason to suppose are the cause of the symptoms.

Just as in the organic somatic affections patients demand from us explanations of their symptoms, are satisfied by explanations which are mostly merely tautological and express themselves as being the better for such paraphrases, so in the psychic affections of the class to which I have been referring interpretation of the symptoms affords relief and not uncommonly eventuates in a cure. At times psychotherapeutic methods alone suffice, but at others certain adjuvants are of importance. One of the most prominent features in the well-known Weir-Mitchell mode of treatment consists in the removal of the patient from his usual surroundings and in his separation from relations and friends. In this there are two objects in view—one that the patient may be as completely rested as possible, and the other that the influence of doctor and nurse may be paramount. The field is, in fact, cleared for psychotherapeutic influences. Other important adjuvants are complete rest and improvement of the general nutrition by feeding the patient up. It is very frequently the case that the patient, harassed by his symptoms, is run down and sleepless, and it is in such cases particularly that rest and feeding are required.

It is not possible for the medical man, restrained by his special education and by the knowledge of the limitations of his science and art, to affect, as does the charlatan, omniscience and to impose on his patients with a show of therapeutic omnipotence. In this respect non-scientific so-called healers must for ever have the start of him, but there is no reason to doubt that he may recover from them much that he has lost if he will recognise to the full the very large influence that the mind has upon the body, both to afflict it and to heal it.

THE PRESENT POSITION OF RADIUM EMANATION-THERAPY IN GERMANY.

BY DR. W. ENGELMANN.

SLOWLY but surely the interest in radium emanation-therapy is growing in Germany. Universities, academies, and larger hospitals are becoming more and more occupied with this new method of treatment, seeking to investigate scientifically its essential nature entirely apart from the Kur administrations, whose attention is naturally concentrated on the practice of this therapy by means of their radio-active waters. Emanation-therapy has undergone frequent changes, short though the period is since its introduction; various apparent objections have explained themselves, and, as the close of this article shows, a mean position has been arrived at, although the precise rules now laid down cannot dispense with an experimental foundation.

Upon the discovery that the greater number of natural mineral waters are radio-active—i.e., contain radium emanations, it followed that their remedial effect must in part, at least, be attributed to these constituents. The lively interest thereby awakened in all health resorts, however, was considerably lessened when it was ascertained that, although all these springs certainly contained such emanations, few possessed them in sufficient quantity to be of therapeutic value.

The discovery that emanation water could be artificially produced—i.e., that ordinary, inactive water could be made radio-active by contact with a radium preparation emitting rays—was a considerable advance in emanation-therapy. Emanation water can now be therapeutically and experimentally applied up to any desired strength. The first reliable clinical observations dealing with radium emanation-therapy and its introduction are due to Dr. Löwenthal of Brunswick. Observations made at springs possessing strong emanatory constituents are of service in proper considerations as to the size of the dose and the quantity serviceable or injurious to the body. Communications from various sources include the observations made on a large scale at Kreuznach and already published. In all places the indications summarised at the close were almost identical, and they still practically remain so.

It has been ascertained that not only are the Kreuznach springs radio-active to a high degree, but that the solid constituents also contain radium—that is to say, that the well "sinter," a sediment that precipitates itself in the brine tanks,[1] is impregnated. It exists here in such quantities that it is worth while to undertake its concentration in order to obtain highly valuable radium combinations.[2] It thus becomes quite clear why a hundred years ago the Bad physicians preferred this sinter for bandages and therapeutical purposes. They extolled its extraordinary power of furthering resorption, in many cases surpassing that of mother-lye—an interesting empirical practice forestalling the proof of science. Apparatus, erected on a large scale, is used for the preparation of emanation water, which is added to the brine (already very strongly radio-active) in the bath pans. Exceedingly valuable radium salt obtained from sinter is used for all kinds of medical preparations, such as salves, compresses, and injections.

Emanation being recognised as an effective agent in the form of a modified gas and possessing the qualities of gases, it was at first maintained that the principal effects obtainable through the bath and drink cures were derived from the gas constantly escaping from the water and conveyed to the body by inhalation—i.e., through the lungs. A step further led to the conclusion that the baths, as such, were superfluous, and that it was more practical to extract the emanation and inhale it in gaseous form. Indeed, some physicians practising emanation-therapy actually made use of the inhalation method in the first instance. Last January Professor His of Berlin reported to the Berlin Medical Association that he had obtained numerous favourable successes with emanation by placing the patients in an "Emanatorium," i.e., in a small compartment containing air laden with the emanation, where they remained for several hours. Theoretically this appeared quite comprehensible, but it needed confirmation. Admittedly, emanations are very quickly eliminated by respiration; it was hoped that by placing the patients in emanation rooms this elimination would be prevented, and that in a short time equalisation between emanation air absorbed by the blood and the laden atmosphere would take place. It is, however, very doubtful whether the solution of the problem is so easy. In addition to being a simple, indifferent gas, emanation has other properties, including the dispensing of induced activity—i.e., the emanation is precipitated on all solids with which it comes into contact, such as bodily tissue, liquids, and cells. Nevertheless, the results of inhalation were good and indisputable, and the question now under discussion is whether all other methods of application, such as bath and drink cures, are to be abandoned in favour of the inhalation cure.

In reference to emanation bath treatment Löwenthal made the statement that emanation could not penetrate through the skin into the organism. In contradiction of this I was able last year, at the Medical Clinic at Bonn University, to prove that emanation can be taken up very well by the body, through the skin, although it can be traced only in small quantities. The baths, therefore, again received their due, since experimental proof of the justification of their application was forthcoming. On the other hand, the effect of the rays issuing from the emanation and its decomposition on the skin, nerves and their terminations, and blood-vessels, ought

[1] To obtain salt and mother-lye brine is passed seven times over the graduators, then collected in tanks in graduator-houses, and afterwards subjected to operations for obtaining salt. The residue, a yellowish-brown fluid, is the celebrated Kreuznach mother-lye, used for strengthening brine baths.

[2] A radium factory has existed in Kreuznach since 1908, being the only place in Germany where radium salt is obtained on a large scale from its own wells.

not to be undervalued. Evidence in support of this was obtained by allowing emanation to operate on various parts of the body in the form of compresses and wrappings. This explains the great success often observed on the application of the emanation. Only recently Professor Strassburger of Bonn recorded in the *Münchener Medizinische Wochenschrift* the great success he has obtained, and strongly recommended the application of baths and poultices.

It has been proved beyond doubt from clinical observations in successful cases that cures or considerable improvement, often beginning with a typical reaction, have been observed after drinking radium emanation water. The objection that a part of the emanation enters the lungs and blood by breathing—i.e., that even here inhalation is the effective method—lacks probability at the outset. I have been able to prove, in the case of a dog that had a fistula in the duodenum, that the entire emanation, which was administered in the form of emanation water through a pharyngeal catheter, entered the bowel without any essential loss—i.e., in the same degree of concentration. Also very little emanation was traceable in the fæces. The whole quantity of emanation was therefore absorbed in the bowels and transferred to the tissues. It is traceable indeed in the respiratory air in such cases, and that at a considerable length of time after having been drunk, and even after having been injected into the bowels, during which time it must circulate in the blood. A depôt has been established, so to speak, in the bowels, whence the emanation enters the blood and a pharmacological effect is obtained. The presence of emanation in the blood of those who have drunk emanation water has been successfully demonstrated.

In conclusion, the following experiments which I recently made in the Berlin Pathological Institute ought to be convincing, and to persuade even the sceptical of the extraordinary influence that emanation exercises on the juices of the tissues when taken per os. I injected uric acid crystals into the subcutaneous tissue of rabbits, producing deposits similar to the tophi of those suffering from gout. I administered emanation water through a pharyngeal catheter and a very rapid reabsorption of those deposits took place under the influence of the emanation. Control animals treated with inactive water did not show this rapid result. I studied the effect after 1, 2, 3, and up to 14 days in paraffin sections of the swollen deposits. The differences were very obvious. The changes, by-the-bye, were of a similar nature to those found in similar trials at Professor His's clinic. The animals here, however, were in emanatoriums, and the effect of a lengthy stay in the emanatoriums was the same as with my animals after taking every day only one dose of emanation water.

There can therefore be no doubt about the effectiveness of the method in which the emanation water is drunk, and as its application is simpler, cheaper, and more convenient it may, in many instances, be preferable. On the other hand it is not to be disputed that where there exists a possibility of using emanatoriums good results will be obtained. In order to avoid the disadvantages connected with the cost, owing to expensive installation and the apparatus being a fixture and thus preventing many from benefiting from the therapy, I have, in conjunction with Professor Bickel of Berlin and Director Neumann of Kreuznach, constructed a simple inhaler possessing the advantages of being cheap and portable; it is capable of being used by those who are bed-ridden, whilst the therapeutic dose is very exact. If one possesses a Kreuznacher Neumann'schen activator which produces an emanation water of sufficient strength, one can by means of it administer the bath, and supply drink and inhalation cures.

There can be no doubt, according to present views in regard to emanation-therapy, that a combination of all three methods may be desirable in the case of an emanation cure. We allow the patient to take his emanation water two or three times daily, then he takes a lengthy emanation bath, and finally he strengthens the effect by remaining in an emanatorium or by the use of an inhaler. This energetic treatment is applied to patients suffering from general assimilatory diseases, especially in cases of gout. When local disorders are in question poultices are preferred, as recommended by Strassburger, whereby an extraordinarily intensive effect may be obtained upon a given spot by emanation.

The indications for emanation-therapy have been strengthened by ample experience. The conditions for which the treatment is indicated include gout, chronic rheumatism, sciatica, neuralgia, neuritis, as well as exudates and growths which need energetic means to promote absorption. It is proved by the study of the biological methods of operation that radium emanation especially exerts a very great influence on ferments, such as pancreas-ferment, pepsin sour-milk fermentation, autolytic ferment, and diastatic ferment. Recently, together with Dr. Wohlgemuth of Berlin, I have succeeded in demonstrating a distinct influence on glycolytic (sugar-destroying) ferment. How far this may be applicable to the group of diseases in connexion with disturbances of sugar secretion we do not attempt to decide, but in any case this result is an interesting addition to the biological effects of this mysterious agent.

Bad Kreuznach.

INSTITUTIONAL HYDROPATHIC TREATMENT AS COMPARED WITH SPA TREATMENT FOR CERTAIN TYPES OF INVALIDS.[1]

BY THOMAS D. LUKE, M.D. R.U.I., F.R.C.S. EDIN.,
MEDICAL SUPERINTENDENT, THE HYDROPATHIC, PEEBLES, N.B.

AROUND the word "hydropathic" there has always existed a certain amount of opprobrium, from its very initiation, more particularly in the eyes of the profession. At the very beginning of hydropathic treatment in this country so much was claimed for "the cold water cure," which had been made famous by the publication of Captain Claridge's book on Grafenberg, that a certain section of the public became so affected with the craze as to carry the whole matter to extremes. This is often the case with new methods of treatment, not only with the public, but, one regrets to say, with the medical profession. The result was that the entire system was laughed at throughout the country and was caricatured in *Punch* and the other illustrated journals of the day. We have seen much the same happen in the more recent "sour milk craze."

Some large establishments were erected, however, in various parts of the country, such as the Ben Rhydding Hydropathic, where Dr. R. McLeod flourished and made a fortune. Dr. W. C. Gully, the late Speaker's father, achieved some success at Malvern, while under the very eccentric direction of its lay founder—John Smedley—the institution still bearing his name commenced its career of almost uninterrupted prosperity. Another more modest establishment was Dr. Rayner's at St. Anne's Hill, near Cork. These establishments were all more or less seriously conducted as places for treatment. During the past 30 or 40 years, however, there has sprung up all over the country a certain class of establishment—really of the unlicensed hotel or boarding-house type—which has done nothing but perpetuate the prejudice against the word "hydro." While the rates for accommodation are distinctly lower than the average provincial hotel, the accommodation offered is not so good, and no claim is made to offer any real therapeutic facilities to visitors unless change of air and a Turkish bath be so considered.

The introduction of amusements of the frivolous sort in and out of season does little but irritate the seeker of health, whose inner man, moreover, is usually not satisfied but disappointed. There are, indeed, very few establishments in this country which in any way resemble the "kur-anstalten" of Germany—general sanatoriums not admitting consumptives such as Dettweiler's establishments, in which, though hydrotherapy is employed it is combined without reserve with all known and tried therapeutic measures; where, in short, the treatment is eclectic, and so long as the patients are cured, anything furthering that end from psychotherapy to quinine is employed.

[1] A paper read at the annual meeting of the Edinburgh Branch of the British Medical Association on June 24th, 1911.

That there is room, and, indeed, a demand, for establishments of this nature in Great Britain, there can be little doubt. Of course, the financial side has to be carefully considered, and we have probably not been sufficiently educated up to this class of treatment to ensure a *large* establishment for purely and simply health purposes being carried on at a profit. For business purposes guests other than invalids have to be admitted and catered for in an establishment of any pretensions, but provided the serious purpose of the institution is for treatment these people will but help to keep the atmosphere healthy and from being unduly oppressed with invalidism! Moreover, invalids often prefer to have some relative with them, so that a general sanatorium of this description can scarcely be run on the strict disciplinary lines of a consumptive cure place. At Smedley's the proportion of invalids under treatment varies from 50 to 70 per cent., the latter being quite high enough a proportion for the preservation of a cheerful atmosphere in an establishment where the patients are not segregated in wards but mix with one another freely.

There has been a great deal of outcry of late as to the excessive and unnecessary extent to which patients are sent abroad to Aix, to Vichy, or to Plombières, rather than to our own Bath, Harrogate, or Cheltenham. It is pleasant to know that to some extent our own watering-places are gaining a foothold, that municipal enterprise and good management, with adequate capital outlay, are leading to increasing prosperity. Some of them are now afforded an ample patronage, and in the season an embarrassing one. Nevertheless, one cannot help feeling that this patriotism and discrimination exercised in advising patients where to take "the cure" might go a step further. There is no question but that a large section of patients remain chronic invalids at home and do not regain their health at a spa simply because the whole circumstances and *ménage* of a spa are entirely unsuited to them. One is compelled to think that too often, when selecting a "cure" place for a patient, medical men do not take into account with sufficient care the respective physical and mental capacities or incapacities of the patients themselves. Of the mental incapacity I had recently a striking instance. An old gentleman came to me with a minor skin ailment of gouty origin, who had been advised to go to Harrogate by a consulting physician. His memory was absolutely non-existent, and even in the comparatively limited confines of the institution to which I am attached he was perpetually losing his way or his hat. Too often there seems rather a rule-of-thumb method of saying, "Harrogate for the gouty and over-eating folk, and Buxton or Bath for the rheumatic."

In deciding which place is likely to benefit any special patient it would seem wise to run over the various factors in "a cure" which do a patient good. Perhaps we would put first of all the change from the normal and usual environment of the patient, and the importance of this can scarcely be overestimated. This being, on all hands, recognised in the taking of an annual holiday, seems to need no amplification. It is invariably found by the laity, whether they invest in vibrators, in high-frequency outfits, or in electric-light baths, or if they take to drinking sulphur waters to satiety, that they do not—nor will they ever—derive the benefit from such combined treatment as they have possibly done previously from similar measures at a spa or hydropathic. For one reason the applications are made without the guidance of a trained physician or special attendants, and the patients get no better results than they would by dosing themselves with drugs—though possibly running the risk of less harm. But quite apart from this they are probably carrying on their usual avocations, and very likely perpetuating bad habits, dietetic or otherwise, which are the very first origin of the indisposition. Moreover, they have none of the distractions and amusements afforded by a watering-place, nor do they meet with the new and often interesting acquaintances, and so be in a position to while away the time and forget physical disabilities. For there can surely be no better anæsthetic or more wholesome restorative for the neurasthenic than exchanging ideas on a subject of really keen mutual interest with another man or woman. I submit that the benefit derived from a visit to a "cure place" or sanatorium is in a large measure due to the proper regulation of the patients' lives as directed by the physician in whose care they have placed themselves, and, one may add, to a willingness on their part to do some things and not to do others in a way which would be quite impossible or irksome to them when at home. Many people ordinarily intolerant of any sort of restraint are rather tickled by the novelty of the thing *for a time*, and there is a certain type of man who takes a pride in the severity of the restriction which is imposed upon him by the new doctor, which he considers to be but in keeping with the size of the fee charged for the advice!

A fashion has got about of late, more especially since radium has been in vogue, to attribute the benefit above referred to to physical rather than psychical influence—viz., to radio-activity in the waters. This, indeed, has the support of no less an authority than Dr. A. P. Luff. Personally I think such ideas should be accepted with the gravest scepticism as really resting on pure conjecture. Dr. Luff says: "If the efficacy of any mineral water depended solely on its watery constituent I do not for one moment think that the resort of sufferers to the various mineral water springs would have so successfully stood the test of centuries as it undoubtedly has. The fact is that in judging the effect of mineral waters we have been under the domination of the analytical chemist, and our deductions have been biassed and cramped. I am satisfied that analysis is unable to convince us of the state of the salts dissolved in the waters. Most of the natural mineral waters have been found distinctly radio-active, and the lower the mineralisation the greater the radio-activity. A natural mineral water at the moment of its discharge from the earth is radio-active, whereas ordinary drinking water is not possessed of this property in any appreciable degree. Hence the desirablity of drinking the water at its source, since in bottling and keeping its radio-activity may in great measure be lost. When we consider the influence of radio-active emanations on new growths and various morbid tissues, is it too remarkable to conceive a radio-active mineral water will exercise a potent effect on those morbid changes within the body which are connected with abnormal tissue metabolism?"

With all respect I must differ from these conclusions. Surely we have more ground for attributing the cures to psychical effects and change of habit than anything like radio-activity? All we know of radium is very imperfect. While more convenient than X rays its efficacy is in many ways no greater, and at the recent Brussels congress it has been much discredited as a therapeutic agent. Looking back on past fashions one does not feel too bold in saying that in a few years' time it will have found its niche in therapy, and possibly be considered to be too dangerous to the patient and operator to use to any extent. Its efficacy is based on the production of a marked local reaction on morbid tissues, especially in new growths. Is it not the wildest imagination to think that an atonic stomach, a passively congested liver, exhausted neurons, or granular kidneys can derive the smallest degree of benefit from this very radio-active power contained in a water? Is it not conceivable, indeed, that such conditions might be hurtfully influenced, and just as probably—if they are influenced at all?

With astonishment we read some months ago in the reports of a speech by the chairman of a mining company very sanguine remarks as to the high degree of radio-activity of the water running into a particular mine—that it was twice or more as radio-active as the Harrogate water: *ergo*, must be more valuable therapeutically. The suggestion was accordingly brought forward that the vicinity of the mine, where pitchblende was being sought and obtained, should be turned into a spa. I have not yet seen a prospectus of such a new concern, but it may still appear, and when such theories are brought forward can we wonder if the enterprising company promoter grasps the opportunity for personal gain?

I have a great respect for some spas, and feel certain that their reputation rests on something less nebulous than *radio-activity*. It rests on the fact that alkalis neutralise acids—a very old bit of chemistry; on the efficacy of sulphur, well known to our grandparents as "a safe family remedy"; on the efficacy of heat, moist and dry, in relieving chronic and acute pain; on the admirable organisation of spas by the bath committee or manager of the various municipalities; and last, but not least, on the number of able scientific physicians who practise in the best-known watering-places in this country and abroad.

Whatever advantages there may be about a spa—and there are many—there can be no disguising the fact that there are

at least two very obvious drawbacks. The first is the risk of the patient catching cold while returning from the pump-room after a Vichy douche or some kind of hot bath. This especially applies to English spas in spring and winter time. At Vichy, as is well known, the greatest care is taken of patients in this respect, and they are carried back to their hotels or rooms well wrapped in blankets. However, in our climate it is different: the patient, from motives of economy, either walks back or goes in a draughty cab. Serious chills have been taken in this way, and when patients suggest coming for treatment by train and returning the same day I strongly advise them against it; for very often the good obtained is much overbalanced by catching a severe chill. Another tangible objection to going out for baths is the added fatigue where the patient is at the start run down and overtired.

All hydropathic treatment—packs, douches, and sweating baths, for some time at any rate, rather "take it out" of the patient, as it is expressed. Add to this the fatigue of changing clothes three or four times a day, including dressing for dinner at the hotel, and quite apart from any walking which the patient is ordered or may take, a heavy day's work is put in. It would seem very ill advised that the Harrogate municipality has passed a by-law prohibiting the use of any medicated bath in a hydropathic within the town boundary, and so compelling patients to go to the Royal Baths for their treatment, and interfering with any private enterprise. The policy seems a very shortsighted one, and the treatment of big ratepayers arbitrary in the extreme.

A walk before breakfast to the pump-room for their sulphur water, and a later visit for more water, for massage, or gymnastics, or liver packs can do nothing but good to an over-fed and over-drinking gourmand and the like. But the case is markedly different with other types of patients. One or two instances will make the point more clear.

In June, 1910, Dr. H. Garnett Wilson, Glasgow, asked me to see a patient with him in Glasgow with a view to her coming to Peebles for treatment if at all fit. She was a maiden lady of some 54 summers, in a very wretched condition, practically living in bed, who had spent her life as an invalid. She was thin to emaciation—white haired, haggard, and hysterical, with a rapid pulse of 90, often running up to 120 or more. She suffered from marked mucous colitis with severe constipation, and had dieted herself down to slops and toast, and very little of that. She had only been outside the house about three times in the preceding year. She was a difficulty to her medical adviser, as well as to her relatives, being querulous and morbid to a high degree. A long journey was out of the question, but about a fortnight after I saw her she came under treatment at Peebles. She arrived more dead than alive and looked so very ill that she was supposed to be dying by the maids. She was one of the most difficult patients I ever had to do with. Beginning treatment very carefully and gradually, increasing massage, with a more liberal diet, which she took at the sword's point practically, she was slowly brought back to a degree of health. In a three months' stay she gained 16 lb., the mucous colitis and the associated pain were subdued, and the patient's general condition was so vastly improved that before she left she was able to take an interest in amusements and to take short walks.

Now, to such a case, a change from the home environment is undoubtedly essential if good is to be obtained, and the discipline of an institution and immediate touch with the medical attendant are almost as essential. The fatigue of treatment, especially the Plombières douche, was very trying to her, and anything like going outside would have made it impossible. To such a patient I submit sanatorium or hydropathic institution treatment makes all the difference between going down the hill and regaining health, and a spa would be out of the question. In a well-conducted sanatorium the physician spends the day in and among the patients, more or less, and sees them in various ways, and hears a great deal about them from nurses and attendants, which throws valuable sidelights on each case, and gives him a knowledge which even a family medical attendant calling day by day might find it difficult to obtain.

Another patient of the same class was sent to me in June, 1909, by Dr. W. A. Stephen, Loftus-in-Cleveland, Yorkshire. Her age was 34 years. For some time she had been in a very anæmic condition and suffering from a certain amount of pyrexia. There was a morning and evening elevation of from half to one degree, but without any notable perspiration. The patient was apathetic to a marked degree and very shy and silent. It was difficult to get very much out of her, and she spent a great deal of time lying about in her room, being unable to take more than a little exercise. The anæmia was pretty intense, the reds counting about 1,800,000, and the hæmoglobin about 40 per cent. The chest was thoroughly overhauled by myself and by the physician of a sanatorium for consumption who happened to be staying with me at the time, and we both considered it clear of any mischief. On careful examination of the mouth I found that the patient had very bad teeth; indeed, they were carious and covered with tartar. The breath also was bad. I strongly urged the removal of the whole of her teeth, with a view to improving her digestion and the elimination of any degree of oral sepsis. This was accordingly done by a dentist, and from that day the patient steadily improved. The temperature ceased to rise both at night and in the morning, and the blood condition changed for the better. The patient was put on a liberal diet, kept in an open-air chalet, and given "Carnine Lefranc." At the end of August, on my advice, she went up to the Speyside district and returned home in September perfectly well, having gained over a stone in weight.

Other cases could be cited, but these two will serve to demonstrate my point. In both instances, only by keeping in very close touch with the patients was it possible to get them out of the "slough of despond" of misery and ill-health into which they had sunk. To patients so gravely ill I submit that a spa—and a spa in the season of all places—is in no way adapted, with residence in rooms or hotel. Hydrotherapy has its disadvantages even when administered under skilled direction. In cases of this nature one never knows how patients will stand any special treatment. This being so, in the first place, special treatment should not be given except with the medical man within call, so that a report can be made to him at once of any untoward effect. For instance, in the case just cited, as the patient improved she was put on to a rain bath and Scotch douches for the anæmia. The effect of the first one was to make her faint and to induce a condition of considerable collapse. I was sent for immediately and got her around, and in spite of the first unpleasant experience she persevered with a little coaxing, with the best results. But, as a rule, patients of this class do not flourish if simply prescribed for and handed over to the tender or other mercies of the bath attendants until they see their medical adviser again. They are, in short, cases for *institutional* treatment rather than for a visit to a spa.

There can be no question but that the poorer classes who become hospital patients have a great advantage in some ways over better-class paying patients. Chaffingly I said to a medical friend recently—a hospital physician—that nowadays the thing seems to be to *keep patients under observation*, rather than treat them in hospitals, more particularly teaching hospitals. Now, it is just this careful observation which is in many cases of the greatest value to the patient, especially the chronically ill person. The house physician and the senior and assistant physicians all examine the case, overhaul the patient, and an accurate diagnosis is made. Every system of the body is investigated, the blood-pressure repeatedly estimated, and blood counts are made.

Thus there would seem to be really a call for institutions of the above type for better-class people in this country—not nursing homes, but general sanatoriums where patients can be observed and investigated in like manner. Such establishments in no way constitute themselves a rival to the family medical adviser, to consultants, or to spa physicians. From the spas they should be differentiated as treating a different type of case. So far as the former are concerned, the physician to such an establishment should be simply a useful colleague, his duty being to treat the patients by methods which for one reason or another have not previously been available, to report progress from time to time to the home practitioner, and to shed any light which can be shed on obscure cases by close personal observation, to the end that the patient may regain his or her health, and that the much-tried medical attendant may be relieved of what often becomes an intolerable plague—an uncured chronically ailing nervous patient.

Peebles.

A CASE OF COMPLETE GASTRECTOMY.

BY B. G. A. MOYNIHAN, M.S. LOND., F.R.C.S. ENG.,
PROFESSOR OF CLINICAL SURGERY, UNIVERSITY OF LEEDS, ETC.

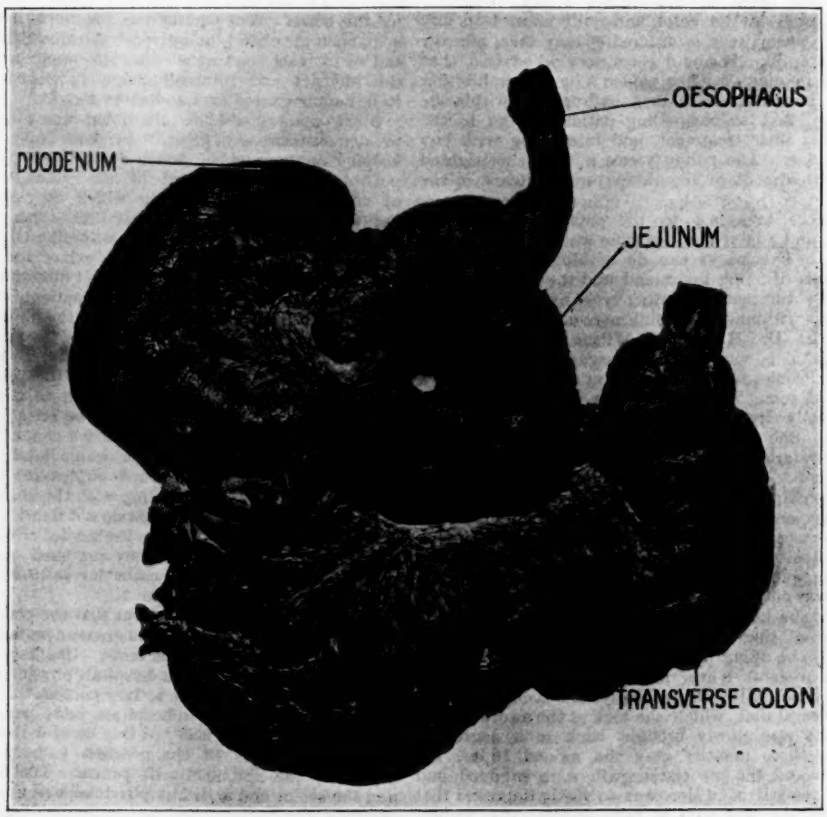
IN THE LANCET of Dec. 21st, 1907, I recorded "A Case of Complete Gastrectomy." The patient was a man, aged 43, who had suffered for two years from gradually increasing distress after food. At the operation a small, greatly thickened stomach was found, and as no healthy part of its wall could be discerned the whole organ was removed. The cut end of the œsophagus was stitched to the side of a loop of jejunum, brought upwards through an opening in the transverse mesocolon. The pathological report of Dr. F. Craven Moore stated that the stomach was involved in "a neoplastic change of a particular type which has its analogue in the so-called atrophic scirrhus met with in the mammary gland."

The patient made a good recovery from the operation. He was shown at a meeting of the Section of Surgery of the Royal Society of Medicine on Dec. 19th, 1907; and in July, 1910, he was seen and examined by the members of the American Society of Clinical Surgery who were then in Leeds. He died on Jan. 31st, 1911. During the three years and eight months that he lived after the operation he was under the constant observation and the occasional care of Dr. Geoffrey Thompson of Scarborough, who has kindly given me very full details of his progress.

The patient was perfectly well up to the early part of the year 1910, when he began to show the evidences of a profound anæmia. He was strikingly pale and breathless, and he lost weight. Under treatment, however, he improved, and in May, 1910, his colour had returned and he was able to ride and drive and attend to matters on the farm. In August, 1910, he began to fail again; he became easily tired, though he still tried to carry out the greater part of his work. His appetite remained good and he had no indigestion. In October the signs of anæmia reappeared, he grew much weaker, and had to cease work. He began again to lose weight, his appetite vanished, and he occasionally vomited. There were no abnormal physical signs of any kind in the chest or abdomen throughout the illness. Soon after Christmas, 1910, he had to take to his bed, and he died on the last day of January, 1911.

I saw the man myself on many occasions. He expressed himself as feeling well and vigorous, and he had gained 2 st. 10 lb. after the operation, and he held the gain for nearly three years. His appetite was good, he experienced the sensation of hunger, and he was able to eat the ordinary foods; but he had to take a rather longer time over a meal than in the days preceding his original illness.

The post-mortem examination for which Dr. Geoffrey Thompson had arranged was made on Feb. 1st, 1911, by Dr. M. J. Stewart, and his report is as follows: "The body is that of a somewhat emaciated man. All the tissues and organs exhibit an extreme degree of anæmia and the blood within the heart and great vessels is very watery in appearance. On opening the abdomen, the peritoneum is found to be free from disease, although there are some old fibrous adhesions between the first part of the jejunum and the operation cicatrix in the anterior abdominal wall, as also between the liver and the diaphragm. The cardiac end of the œsophagus is anastomosed to a loop of jejunum, which, for this purpose, has been brought through the transverse mesocolon. The proximal portion of jejunum and the duodenum, which ends in a cul-de-sac underneath the liver, appear to retain pretty much their normal dimensions, but at the seat of anastomosis and for a short distance beyond it, the jejunum appears to be slightly dilated. The whole intestinal tract, however, exhibits a marked degree of



Case of complete gastrectomy. Reproduction of photograph of specimen showing the condition found on post-mortem examination.

gaseous distension, and in the large intestine there are very numerous scybalous masses of considerable size. The liver is pale and somewhat fatty; the gall-bladder normal. The spleen contains a large and very old infarct, which occupies nearly the middle third of the organ. The kidneys are extremely pale and anæmic, while the capsules strip readily. The suprarenals are normal. There is no evidence of malignant disease in any part of the abdomen. A few of the retro-peritoneal glands are enlarged, but on microscopical examination they are found to be quite simple. The heart muscle is very pale and flabby. The valves are normal. The aorta and coronary arteries are quite healthy. There are numerous old adhesions on both sides of the chest. The lungs are extremely œdematous; they contain only a minimum of carbonaceous pigment. Microscopically the kidneys show well-marked though early fibrosis, involving both the interstitial tissue and the glomeruli. The chief points of interest are: (1) Complete absence of any recurrence or dissemination; (2) the very profound anæmia; and (3) absence of any striking jejunal dilatation at or near the site of anastomosis."

The photograph of the specimen brought to Leeds was taken in my laboratory. It shows well the anastomosis between the œsophagus and the jejunum, the slight dilatation of the jejunum, the blind rounded end of the duodenum, and the absence of any secondary growths.

Leeds.

AFTER-CARE.[1]

BY H. W. McCONNEL, M.A., M.B. CANTAB., M.R.C.S. ENG.,
SECRETARY TO THE KELLING SANATORIUM.

BY after-care I mean the looking after a patient and his surroundings after he has left a sanatorium or a dispensary. But it is of importance that the consideration of his future should be begun as soon as he commences treatment, and that the treatment itself should be modified accordingly. For it should be remembered that the object of the sanatorium treatment is not only to arrest a patient's disease and as much as possible to return him to work, but also to lead him, whether he knows it or not, to act as an educator of his own home circle and of all those with whom he comes into contact. He has not only to be cured, but he has also to spread abroad the principles of the open-air treatment by his example and future life. It must also be remembered that the social side of the circumstances of each individual patient is of great moment, and should be most carefully taken into consideration in the after-care.

After-care is of the utmost importance to the patient and to the nation. Indeed, it may be said that without it sanatorium treatment among the working classes loses much of its advantage for good, and is apt, moreover, to lead to a waste of public money.

There are two chief reasons why after-care is of such importance: (1) It allows the helpers—i.e., those that carry it out—to bring their influence to bear in the homes of the afflicted in a way that no other chance can; it gives them an entrance to these homes at a time when what they have to say and the lessons they have to teach will be fully considered; and (2) it supplements the sanatorium treatment, which is of necessity very incomplete.

Sanatorium treatment among the working classes is incomplete because it is almost always too short. The treatment is expensive and the length of time required for a permanent arrest is longer than the patient or his friends can afford; so in the majority of cases it is essential to supplement it by after-care if the good that has been gained is not to be lost again, and if the money that has been spent is not to be wasted.

Thus, having made out a case for after-care, I should like to consider very shortly what are the difficulties that are experienced by the patient himself or his friends both while he is at the sanatorium and also after he returns, and to mention at the same time how after-care can help to meet them, and then I should like to consider what is being done at present and what more can be done in the matter.

[1] A paper read before the National Society for the Prevention of Consumption and Other Forms of Tuberculosis on July 22nd, 1911.

The National Association for the Prevention of Consumption appointed a committee a few months ago to consider the subject of after-care and to make recommendations. This committee sent letters and questions to all the working-class sanatoriums—i.e., to 67, representing 4019 beds—and got more or less complete answers from all except one. It then sent similar letters and questions to a large number of Charity Organisation Society committees and kindred societies—to 228—and about half of these gave full answers and were therefore taken as typical; the information thus gained I have introduced into my subsequent remarks.

Now as regards the difficulties that can be dealt with by after-care, these fall under two heads: (1) those under the patient's control and (2) those not under his control. Those under his control are mainly (1) that he will not take advice and (2) that he is very slack in carrying out the lessons learnt. He will not take advice and delays in going to the sanatorium and thus turns an early case and one suitable for treatment into an unsuitable one from which a partial recovery at the best is all that can be hoped for. Again, after he has been at the sanatorium for a couple of months he begins to feel quite well, and he will not take the advice of those who recommend him to stay there for a longer time but insists on returning home and so loses his best chance of making the arrest of his disease permanent. Of course, I am not referring to the cases where want of money and home calls compel an early return, but rather to cases where these difficulties could be met, and where the chief obstacle lies in the cocksureness of the patient himself who imagines that because he feels well he is well. He is apt to give thanks and pity to the adviser; later he finds that he is wrong. In this difficulty an after-care committee can often control and influence where a casual remark has no effect.

Secondly, when he gets home, he is often slack in carrying out rules. When at the sanatorium, the patient learns the principles of treatment. He is taught how necessary open windows and fresh air are; how the food should be simple, well masticated and eaten slowly; how he should avoid rush and go early to bed; how he should rest before and after meals and should never sit down to meals when hot or tired; in a word, how he should make the best use of his off-time—i.e., of his out-of-work hours—in regaining and in keeping his health. He is taught all this at the sanatorium, and often when he gets home again he finds the windows shut and the house dusty, and instead of making an effort at once to bring about a change in the home, insisting on cleanliness and fresh air, he is apt to let things be. It is so easy to let things be and so difficult to alter old customs, but the disease has been arrested and the whole control of his home and his leisure hours lies with the patient. If he carries out what he has learned and what he has been taught he may keep well; if he lets everything slide he is qualifying for a relapse. If he is a bread-winner his whole family suffer through his fault and his gross slackness in the matter. Here, again, an after-care committee, by following the case up and by giving the patient advice at his own home, and by urging him to make use of the knowledge gained at the sanatorium, can do untold good, not only to the patient but also to those with whom he comes into contact.

The difficulties that are not under the patient's control are (1) incapacity and (2) the fear of infection.

1. The primary causes of incapacity are going to the sanatorium too late and staying there too short a time, and the result is incomplete arrest of the disease and liability to relapse; but our investigations show that it is probable that there is no greater difficulty in an ex-patient—i.e., in a patient from a sanatorium—getting employment than there is in the case of anyone else who is not fully capable from any other cause. Incapacity from phthisis is not more difficult to deal with than incapacity from any other reason.

2. Now a few words about infection, or fear of infection. It is necessary to mention the fear as well as the infection itself, for in the uneducated and unreasoning mind of the employer the fear has often more weight than the actual thing itself. The risk of infection, has, of course, been grossly exaggerated and is very slight indeed from a consumptive who is able to work, and from an ex-patient who has had sanatorium training it is almost *nil*, and is as nothing compared to that from a consumptive who has not had any hygienic teaching. It is founded on a misconception and a want of knowledge, and therefore must be combated by the after-care committee by every possible means.

It will be necessary to show the employers that to refuse work to an ex-patient because he has been to a sanatorium is not a very clever thing or a very reasonable thing. He is not dangerous, but, on the contrary, the fact that he went under treatment early and has got the disease arrested has removed all danger from him. If through fear of being turned out of his job he had worked on and on as long as he could till he broke down badly, then indeed there would have been danger to his companions. Once men know that their employers will take them back on their return from the sanatorium if they are capable, then directly they feel they are ill they will put themselves under treatment at once and will give themselves every chance of recovery; but as long as employers say to their men, "You have been to a sanatorium and therefore are dangerous," so long will these men hide up their disease and will remain a real danger to their fellow workers till they break down and go home to die. Combating these difficulties, especially with the employers, the after-care committee can do much to help, and remember, the employers want as much education as the employed.

Now a few words about the after-care work that is being done. The results of inquiries among the working-class sanatoriums show that about half—the exact figures being 36 out of 66—do after-care in some way, and the methods adopted fall under four heads: (1) Preliminary; (2) working patient scheme; (3) advice to patients; and (4) subsequent after-care.

1. Time does not permit of entering into details, but I may briefly state that by preliminary I mean the Gospel of Hope, the feeling that is engendered in all good sanatoriums among the patients that arrest and an active future are the object of their stay, and that to effect this they must work. They all work; all are as busy as busy can be, the loafer is not developed; they all look forward to arrest and future usefulness.

2. To help this still more the working patients scheme comes in. Selected cases are kept on; they give their work and get their board and lodging, and so are allowed a further period of treatment under more strenuous conditions, with time to get quite hard and time to look out for a suitable future. The nature of the work given differs in different sanatoriums. In some the men are employed in and about the place at work that brings into use their former experience and occupation. Thus, a carpenter is made to do his particular kind of work and a painter to paint, &c. At others attempt is made to teach definite trades that may be useful afterwards—French gardening, gardening, poultry farming, &c.[2] And thirdly, at some few sanatoriums a definite course of work and employment—a graduated system of labour—is proposed, with a view primarily of getting the patient hard and turning him out effective and less liable to relapse; thus, a gravel-pit is worked or ground is levelled—work of little use in itself but devised solely for the patient's improvement.

3. Under "Advice to Patients" is included the general lectures and teachings, and the individual advice. The latter is best done after a month's stay, when the prognosis is the more clear and the future can be better estimated. Each case is dealt with separately and on its own merits, and the possibilities considered, taking into account the home ties and the surroundings, and recognising the great advantages of the old employment, because it is the one that is known and therefore the easiest, and recognising, too, that a bad employment is better than none at all, for none means starvation and therefore relapse. It must always be remembered that the bad effect of what seems a hopelessly unsuitable employment may be neutralised by the correct use of the remaining 16 hours which are absolutely under the patient's control. Usually, also, further advice and a useful leaflet are given just on leaving, and each and every one is made to understand that when they leave they must avoid excess, must lead a quiet, sensible life, and always carry out the principles of open-air treatment, fresh air, plain food, and rest before and after meals.

4. And then, finally, the subsequent after-care—the looking after the patients after they leave. Experience shows that not much can be done in this way by the sanatoriums. It is possible, indeed, by postcards and Christmas cards to keep in touch with the ex-patients, and it is desirable to get them to call periodically for advice and examination, but this is about all that can be done. To follow the patients up after they leave and to keep a systematic hold on them are beyond a sanatorium's powers. This work must now be left to the senders—to those who sent the patient to the sanatorium: they must now step in and take charge. All ex-patients need a friend, and it is very pleasant to be able to state that the societies—the Charity Organisation Society and similar societies—mostly do help in this way; that out of 102 that send patients to sanatoriums, 83 look after them on their return, in some way mostly through the ordinary visitors; six have special visitors and six others after-care committees, and about a third make special efforts to get employers to coöperate in finding work, &c.

This, then, is the present position: 1. After-care is an essential to meet the various difficulties. 2. The sanatoriums, either by special after-care committees, by lectures or by individual advice, do much to help and to start the patient off well. 3. A large proportion of the senders are already organised to do what they can to carry on the work. But it is here, in the link between the sanatoriums and the senders, that the failure comes in; there is apt to be a hiatus, and the link is apt to be missing; there is a want of continuity in the advice given, and much good is lost by want of coöperation of the various advisers.

After careful investigation of the situation the National Association for the Prevention of Consumption has decided to meet this difficulty by the following recommendations, believing that much better results will be arrived at by some uniform scheme. The recommendations are as follows:—
A. To advise both the sanatorium authorities and the senders: 1. To recommend their patients (*a*) to return as much as possible to their old employment; (*b*) to make the best use of their leisure time; and (*c*) to carry on in their own homes in every possible way the principles of the open-air treatment learnt in the sanatorium, both as regards themselves and their friends. 2. To see that each patient has a leaflet of instruction in his own home. 3. To try to convince employers that the risk of infection from an ex-patient is very slight and as nothing compared with that from a consumptive who has not had any teaching.
B. (And this is the important recommendation.) To ask the superintendents of all sanatoriums for the working classes, with a view of getting continuity of advice, to secure in some way that advice and help be given to patients while at the sanatorium about their future life and work, and to arrange to give, if asked, a report or memorandum of this advice to the sender.
C. To ask all Charity Organisation Society committees and kindred societies who send patients to sanatoriums to look after the cases they have sent on their return; and to get and make use of the sanatorium's report and advice about each patient.
D. *As regards London*, to ask the Medical Advisory Subcommittee of the Charity Organisation Society to appoint representatives in each borough who as private individuals and not as Charity Organisation Society workers will undertake, with the permission of the patients, to visit the homes of the patients notified to them by sanatorium authorities as having come to sanatoriums independently of societies, and who also will undertake on the patient's return to give advice when needed.
E. *As regards the provinces*, to get some similar scheme of representation started according to the need of the place and in the manner best suited to it. The medical officer of health's advice may well be asked in the matter. It is hoped that something on these lines will commend itself to those interested, and it is hoped to start work energetically in the autumn to carry them out.

Special attention is being given in this congress to the National Insurance Bill, and if a reference is to be made to it in the consideration of after-care the following two thoughts may be allowed:—

1. After-care is mainly dependent on individual effort acting in individual cases, and there is a great danger in sanatoriums supported by State funds that this individuality of the workers will be hampered and checked, that private interest and work will be superseded by officialism which will not only be more expensive but less effective, and that the little touch that just makes all the difference between good results and exceptional results will be found wanting.

[2] Here I should like to mention that the garden in the women's quarters at Kelling is being turned over to two girl gardeners, who are not only doing it very well but by their increased health are showing what such work can do for such cases in the way of cure.

2. The working patient scheme where patients are employed in and about the sanatoriums, possibly for a small wage, will be hampered because, unless the Bill is amended, these workers will have to be insured and the sanatoriums will have to pay the insurance, and so a scheme which is only in operation for the patient's good will lead to a larger loss to the sanatoriums than it does at present.

Possibly these difficulties can be removed (1) by working the State-paid sanatoriums through the existing sanatorium machinery and so keeping its individuality; and (2) by freeing all working patients whose work is part of their treatment from the action of the Bill; but unless this is done it is impossible that sanatoriums can have the satisfactory results that they do at present.

Norwich.

EXCESSIVE LOCAL PERSPIRATION.

AN ACCOUNT OF THE SUCCESSFUL TREATMENT OF FIFTEEN CASES.

BY A. HOWARD PIRIE, M.D. EDIN.,

CHIEF ASSISTANT IN THE X RAY DEPARTMENT AT ST. BARTHOLOMEW'S HOSPITAL.

MY attention was first directed to this subject about five years ago, when I noticed that after a long-continued series of sittings under X rays the patient ceased to perspire on the part treated. Since that time I have had 20 cases of excessive perspiration to treat. Nine of these have been qualified medical men. In every case which has been fully treated the rays have produced their effect on the sweat glands, and either entirely stopped their action or reduced it to less than normal.

The parts I have had to treat have been: the face, 2 cases; armpits, 10 cases; hands, 9 cases; and feet, 1 case. One case included hands, face, and armpits. In two cases a cure was got after only two applications and no more sittings were given, but usually from three to five have been required. The number of treatments required depends on the dose given. In the two cases which were cured by two sittings both suffered from the effects of too large a dose of X rays (pain, irritation, blistering, and redness), and since these two cases the others have been done by the longer method. I believe six sittings of one pastille dose each at intervals of one month is the best treatment, as it causes absolutely no discomfort and the patient runs no risk.

The rationale of the treatment is, I believe, as follows. When an X ray photograph of the thigh is made the negative shows the bone lighter in colour than the surrounding tissues, because the bone, being denser, has absorbed more X rays than the surrounding tissues. Looking at a normal cell and at a karyokinetic cell, we see that in the latter the chromatic filaments are more condensed, and these denser filaments absorb more of the rays than the normal cell does. There is a limit of X rays which has no effect on a cell. More X rays will stimulate the cell, still more will damage it, and still more will destroy it. The greater absorptive power of the karyokinetic cell to X rays makes it more vulnerable, so that the dose of X rays which will just not kill a normal cell, kills a cell undergoing division. The dose required for this is, I believe, a little more than a pastille dose, so that by giving one pastille dose each month for a period of six months the karyokinetic cells (especially those of slow growth) are destroyed. This principally affects the hairs, sebaceous and sweat glands.

I have had the opportunity of having a piece of skin so treated examined in the Pathological Laboratory at St. Bartholomew's Hospital, and many sections cut from it were examined. The report states:—

> April 28th, 1911. Examination required: Skin after treatment by X rays. Pathological report: The skin was very difficult to dehydrate. On section it appeared normal as regards the epithelium, except that the cells were difficult to stain and much keratinised. No hair follicles, sebaceous or *sweat glands* found. The tissue underlying the surface epithelium was composed of dense fibrous tissue. H. G. B.

Kolipinski has reported one successful case of hyperidrosis axillæ treated by the thermocautery. The result was got by producing burns of the second and third degree. Major F. J. W. Porter, R.A.M.C., recommended dissecting away the skin of the axilla in order to stop perspiration. No other method but these and X rays have been found efficacious in stopping perspiration. Drugs are useless as a permanent cure.

In treating the hands or armpits I get all parts of the surface of the skin equally exposed to the rays by means of a delivery tube which has a firm base of celluloid. The celluloid is a part of a sphere whose radius is 24 cm. The source of the rays is placed at the centre of this sphere and the hands are pressed firmly against the celluloid. Thus all the parts of the hands which touch the sphere are exactly 24 cm. distant from the source of the rays. A barium platinocyanide pastille is placed 12 cm. from the source of the rays and another pastille is placed on the hands. The dose can thus be measured by Sabouraud's method and at the same time by the control on the skin.[1] Another control I use at the same time is the milliampère minute method with a water meter. The celluloid absorbs a small quantity of rays, and I trust mostly to the pastille on the skin and look on the other two methods as controls.

Pusey in 1903 and Bulkley in 1904 reported cases of hyperidrosis in the axilla which were improved by X rays. Engmann was the first to recommend the application of a dose which would produce an erythema. Lanari recommended in treating the palms of the hands that the surface should be divided into four areas and each area treated by itself. The dose to each area he recommends is 8X—i.e., nearly two pastille doses—so as to produce redness, swelling, and skinning. The skin is shed in large flakes, leaving red, smooth skin underneath. The skin becomes normal after several weeks. He considers one such application sufficient for a permanent cure, and reports a perfect result in one case a year after the treatment. In one case in which I carried out this treatment the perspiration was not checked. In other two cases (Cases 7 and 8) such a dose had the desired effect, but caused much discomfort, and I do not recommend so large a dose. Stover in 1905 and Kromayer in 1907 reported cases of hyperidrosis treated by X rays.

I can only find reports of isolated cases, and I therefore think that a report on a series of 20 cases should prove of interest. They are the following:—

CASE 1.—The patient, about 45 years old, had suffered from excessive perspiration in his armpits for the last 30 years. He was very definite in his description of its type, which was as follows. It began after 10 A.M. and continued till about 6 P.M. During the evening and in bed he was not troubled by it. Cold and worry aggravated it; therefore he disliked driving on a cold day and writing letters which required much thought. Treatments by X ray were given on May 25th, June 19th, and July 24th, 1909. On the last date he said the perspiration was less. He noticed that when he perspired in the morning his shirt was wet, but that it dried again before evening, whereas it used to remain wet all day. On August 28th he reported that he no longer required to change his undershirt while dressing for dinner, provided he had not been working hard during the day. Another treatment was given on August 28th. On Sept. 19th he reported perfect comfort except on extreme exertion.

On June 23rd, 1910, he wrote to me: "I am glad to say that my arms are still quite comfortable. Even yet I have not got used to the indescribable feeling of comfort. There are many people, especially women, who ought to have your treatment." On April 12th, 1911, he came to see me for another purpose, and I noticed that both armpits were quite dry. There were telangiectases in the lower half of the right axilla. The left axilla had no telangiectases, and the hair was thin.

CASE 2.—A surgeon, of about 25, suffered from excessive perspiration over his face, hands, and armpits. He was of a nervous disposition, and his perspiration was of the ordinary nervous type, made worse by excitement and lessened by cold. His father also suffered from it. Having so many areas to treat, many sittings were required from July 16th, 1909, till March 25th, 1910. The face was the most troublesome area, and caused me considerable anxiety, but, in the end, hands, armpits, and face ceased to sweat profusely, and have continued so since. In June, 1911, I heard from him, and he remains quite comfortable.

CASE 3.—Dr. —— came to me on May 17th, 1909, suffering from excessive perspiration in the armpits. It had troubled him all his life. On touching the armpit of his shirt and coat I found them quite wet. He showed me what he called his high water line i.e., the line to which the perspiration on his coat extended. At this line a white deposit of the salts of perspiration lay owing to evaporation. He remembered this line on his Eton jacket at school 20 years before. The perspiration was made worse by excitement and heat. It was very troublesome in cold weather. It rotted his clothes. Treatments were given on May 17th, June 19th, and July 2nd, 1909, and on the last date he was improved so far that each day after midday perspiration ceased, and his shirt which got wet in the morning became dry in the afternoon. I noticed his left axilla sweating while his right did not. Further treatment was given on Sept. 17th and since then the patient has been quite comfortable.

An interesting thing happened after the first application of the rays on May 17th—viz, he did not perspire for the rest of the day. He did not remember to have ever before experienced a day without perspiration. On July 24th, 1910, 11 months after his last séance, he described his case to me as one of "unqualified and permanent cure." I have not heard from him since, but I believe he remains cured.

CASE 4.—A surgeon, of about 40, came to me at the end of 1909, complaining of perspiring hands. The perspiration was made worse by exertion and excitement. He had suffered from it as long as he could remember. It troubled him most while attending a confinement or

[1] See Archives of the Röntgen Ray, 1911, for description of this method.

doing an operation owing to his fear of producing sepsis from his own rough and cracked hands. His hands were very rough and cracked from his continual use of 40 per cent. formalin in which he soaked them in order to get temporary relief. X ray treatments were applied at the end of May, June 30th, July 28th, and August 29th, 1909. On the last date he said the perspiration was decidedly better, and I noticed his hands were drier than my own. He had been using formalin. No more treatment was given till March 18th, 1910, owing to the distance he had to come for the treatment—over 100 miles—and due to his professional duties. Perspiration had been so little since the last treatment that he had been quite comfortable. A treatment was given on March 18th and July 8th, 1910, and since then he has had no more trouble from perspiration. On June 7th, 1911, he writes: "Yes, my hands are a great success and no trace of perspiration except, of course, between the fingers, and there very little. I believe the sweat glands are destroyed and that the cure is permanent, for the recent hot weather would have found it out were it not so.

CASE 5.—A physician, of about 40 years of age, had suffered from excessive perspiration in his armpits as long as he could remember. It was made worse by exertion or excitement. Cold did not increase it. He was comfortable during the evening if he was resting, but very uncomfortable all the rest of the day. X rays were applied on Oct. 12th and on Nov. 15th, 1910. Both these treatments were nearly double normal dose, and a month after the last he was so comfortable that he wished no more treatment. He came again on March 1st, 1911, and had another treatment, though he was perfectly comfortable. His comment on April 5th, 1911, on his own case was, "I consider the cure perfect. The comfort can only be appreciated by one who knows."

CASE 6.—A surgeon, of about 30, had suffered as long as he could remember from excessive perspiration in the armpits. It did not usually trouble him during the evening and never during the night. It was made worse by cold and worry. He had tried many external applications for it, including formalin, without effect. Rubber shields were useless, and acted like a poultice. A first X ray treatment was given on Feb. 26th, 1910. This produced a slight reaction and some epilation. When I saw him a month later the perspiration was still excessive, and I watched it collecting into drops. On March 10th another treatment was given, which was followed by marked improvement. The perspiration had so much decreased that it did not soil his shirt. Another was given on May 10th. On July 27th I found both axillæ pigmented, the right completely hairless and the left hairless in its upper half, but not epilated in its lower half. He has suffered no inconvenience from perspiration since July 27th. In November I had an opportunity of examining his axillæ and found the right was absolutely dry, and the left nearly so. His left was drier than my own axilla. It perspired so little that his undershirt was never damp. He remains cured.

CASE 7.—A single lady of about 21, suffered from excessive perspiration in the armpits. It was made worse by excitement and exertion, but it was just as bad in cold weather as in hot. She came to me and had a first treatment on Sept. 28th, 1910. When she lay down on the couch for treatment the perspiration ran from her armpits and soiled an area about six inches in diameter on the couch. A double dose was given on Oct. 25th, and this was followed by a severe reaction. I did not see her for the next three months, during which she suffered from several "boils" in the axillæ which had to be lanced. She had during the past year suffered from boils, and had undergone vaccine treatment for them before she came to me. After the reaction subsided the perspiration ceased in both armpits and no further X rays were required as the patient was quite comfortable. On Jan. 17th, 1911, she reported that her left armpit is always dry, while the right perspires very slightly. Her blouse is never wet, and she takes no precaution to keep it dry.

She came to me at my request on June 7th, 1911, and I found the left axilla had a few hairs in its deepest part, but no telangiectases and slight pigmentation. The left axilla felt quite dry to the touch, though the temperature on June 7th was about 70° F. in the shade. The right armpit had rather more hair than the left and was slightly damp, though not so damp as a normal axilla on a hot day. The contrast of her condition now with what it was when the perspiration ran from her axilla and soiled the couch during her first treatment is very marked.

CASE 8.—A nurse, aged 32, suffered from excessive perspiration in her armpits since 18 years of age. It was made worse by heat, exertion, and excitement. When she lay down on the couch for treatment I saw the perspiration trickling from the armpits down the sides of the chest. A first treatment was given on August 9th, 1910. On Sept. 7th a double dose was given, which caused a severe reaction. On Oct. 13th the reaction began to pass off and perspiration completely ceased. The hairs fell out completely from the right armpit. On examination about six months later I found the armpits quite dry, nearly hairless, and much pigmented. On June 7th, 1911, I heard that the patient had had no more trouble from perspiration. After the double dose herpes zoster appeared about the level of the seventh intercostal nerve. This is the only case in which I have seen herpes appear during X ray treatment.

CASE 9.—A married lady of about 35 suffered from excessive perspiration in her armpits as long as she could remember. The perspiration soiled her blouse very badly, no matter what precautions she took. Treatment by X rays were given on July 26th, August 30th, Sept. 26th, and Oct. 24th, 1910. After the last date the right armpit ceased to sweat and the left sweated still a little. A last treatment was given on Nov. 21st, and since then she has remained quite comfortable.

CASE 10.—A single lady of about 25 suffered from excessive perspiration on her hands. She could not write without soiling the paper nor do needlework without soiling the work. When I looked at her hands the lines in the palms were wet with perspiration. Treatments were given on Dec. 1st, 1910, and Jan. 5th, Feb. 2nd, and March 2nd, 1911. On March 30th she reported that her hands no longer perspired, but that the tips of her fingers still troubled her. Treatments were given on March 30th and May 4th. On the latter date she said she was quite comfortable. The palms were always dry and the tips of her fingers usually were so, but sometimes not. The skin between the fingers remained moist, but not sufficient to cause any inconvenience. She has remained perfectly comfortable since.

CASE 11.—A gentleman of about 40 suffered as long as he could remember from excessive perspiration on his face. It came on badly on exertion, but especially on excitement. So much did it annoy him that he shrank from attending social functions and taking any public positions. Treatments by X rays were given on Nov. 8th and Dec. 8th, 1910, and on Jan. 10th, 1911. On the latter date he reported that he had during the last fortnight attended two dances and perspired less than the other men did. A last treatment was given on March 7th, and since then he has been quite comfortable. On severe exertion he still perspires, but not otherwise. During his treatment I painted his eyebrows with a thick bismuth paste and covered his moustache and hair with lead. The roots of the eyelashes were also covered with lead.

On June 7th, 1911, he wrote me as follows: "The X ray treatment has been a great success. It has stopped the extreme sweating on my face. It only breaks through after exercise in the heat very slightly under my hat at the roots of my hair, just at the nostrils and under my lower lip, and, of course, in the eyebrows a bit, as they were protected. But the whole of it is of no consequence whatever compared with what it used to be. I was down for three days at Bisley in the intense heat and while most other men were streaming on the face I was merely moist."

The parts which he mentions which still sweat are those which were partly protected during the treatment. In treating the face I divide its surface into four areas, and direct the perpendicular ray on each side of the face at a point an inch and a half above the external canthus and at the anterior border of the masseter on a level with the mouth. The areas are treated as for ringworm without shielding the contiguous areas. Four pastilles are fastened in position on the skin with gum before beginning the treatment. During the exposure of one area each other area is getting a little X rays, therefore less than a normal dose is given to each area. The exposures are made so that at the end of the treatment the four pastilles have changed to an equal tint. Thus the whole face gets an equal dose. The treatment made the patient's face appear as if he had been sunburned, but on looking into the eyebrows one could see his original colour. The bismuth paste acted very well and no epilation was caused in parts protected. Epilation of the beard took place. After two months he required to shave as before.

CASE 12.—A student, of about 21, whose hands perspired as long as he could remember. They perspired even in bed. He had tried zinc sulphate, liq. plumb. fort., lead plaster, and dusting powders with no relief. Treatments were given on Oct. 8th, Oct. 29th, and Nov. 19th, 1910. After the last treatment his hands skinned. On the last date I noticed the thenar eminences were dry and the rest of the hands were moist. On Dec. 22nd I noticed the hands were all dry except the fingertips and between the fingers. Since then he has been comfortable and has had no more treatment. A last treatment was given on Dec. 22nd. On June 16th, 1911, he told me that in very hot weather his hands still perspire, but in ordinary weather they are generally dry. The ball of the thumb (which received a greater quantity of X rays during the treatment) does not now perspire under any conditions of temperature.

CASE 13.—A professor of medicine suffered from excessive perspiration on his feet with the result that his feet were always cold. This condition began while standing in the pathological laboratory. On walking 200 yards his feet were soaking. His feet were dry on rising in the morning, but they remained damp till he went to bed. He had two applications at intervals of 14 days in Edinburgh, from Dr. Norman Walker, who sent him for further treatment. In February, 1911, I gave him one treatment and shortly after he reported to me that the condition was much improved. Before he could have another treatment he had to go abroad, and I have not heard of him since.

CASE 14.—A surgeon of about 40 years of age suffered from excessive perspiration in the armpits as long as he could remember. It was made worse by heat and exertion. He also perspired in cold weather. He treated himself by X rays, but unfortunately he produced a bad burn not only on his right armpit but also on his right elbow. This took place in April, 1910. On Feb. 8th, 1911, he came to me for the completion of the cure. I protected the parts that had been burned (the upper half of the right axilla) and the right elbow with lead rubber, and exposed the lower half of the right axilla. Treatment was given to both axillæ on Feb. 8th and March 8th. Although the old burns were carefully protected by the heaviest lead rubber the ulcer broke down over an area of the size of a pin's head and caused much pain. Treatment was therefore stopped. The right axilla is now quite free from perspiration under all circumstances, and the left does not perspire sufficiently to soil his shirt.

CASE 15.—A girl of 14 perspired so much on her hands that it soiled her needlework. The perspiration was less when she was cold and greater when she was hot. The terminal phalanges perspired most. A treatment was given on May 18th, 1910, and another a month later. In June, 1911, I heard from her mother that the patient had not been able to come for further treatment as she had had to leave London, but that her hands were much improved.

Epitome of Result of X Ray Treatment of 15 Cases of Excessive Local Perspiration.

Number of case.	Part treated.	Number of treatments.	Result.
1	Armpits.	5	Cured.
2	Face, armpits, hands.	5 to each area.	,,
3	Armpits.	4	,,
4	Hands.	5	,,
5	Armpits.	3	,,
6	,,	4	,,
7	,,	2	,,
8	,,	2	,,
9	,,	5	,,
10	Hands.	6	,,
11	Face.	4	,,
12	Hands.	4	,,
13	Feet.	1	Improved.
14	Armpits.	2	,,
15	Hands.	2	,,

Note.—Those cases cured in two sittings had discomfort caused by

reaction from the X rays. Those cured in five and six treatments had no discomfort from the treatment and no reaction except slight pigmentation.

The next five cases are still under treatment as they have just come to me lately, viz.:—

CASE 16.—A lady whose hands perspire so freely that I have seen the perspiration fall from her finger-tips five minutes after she has thoroughly dried her hands.

CASE 17.—A doctor who shrinks from his professional duties owing to his perspiring hands.

CASE 18.—A worker in fine steel instruments who has to wear gloves to prevent his perspiration rusting the steel.

CASE 19.—A lady whose hands perspire so much that she soils her work.

CASE 20.—A doctor whose armpits perspire profusely.

These cases, I expect, will yield as the former ones have done.

Excessive local perspiration cannot be classed as a disease, but to one afflicted with it it is a real infirmity. A surgeon with perspiring hands runs a risk of infecting a wound. A physician with perspiring hands leaves his patient's wrist wet after feeling the pulse, and has the chagrin of seeing his patient drying the wrist. When the armpits are affected clothes are soiled and rotted by the perspiration, and the patient is uncomfortable from wearing wet underclothing. Cold feet from socks wet with perspiration is another form of annoyance.

All these conditions can be cured by X rays. In my experience every case which has been fully treated has been a complete success, and I can thoroughly recommend the treatment. When perfectly carried out the patient suffers no discomfort and there are no bad after-effects.

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Harley-street, W.

PRESENTATION TO A MEDICAL PRACTITIONER.—At the Exmouth (Devon) Dispensary on July 24th Mr. Oliver Eaton, L.R.C.P. Lond., M.R.C.S. Eng., D.P.H. Camb., was presented with a silver-mounted pipe, suitably inscribed, by the local detachment of the British Red Cross Society in appreciation of his services as honorary lecturer.

A NEW FORM OF TROCHISCUS.

BY SIR JAMES SAWYER, M.D. LOND., F.R.C.P. LOND., F.R.S. EDIN.,

CONSULTING PHYSICIAN TO THE QUEEN'S HOSPITAL, BIRMINGHAM; EX-PROFESSOR OF MEDICINE IN THE BIRMINGHAM MEDICAL SCHOOL; LATELY LUMLEIAN LECTURER AT THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

THE τρόχισκος of Galen (A.D. 131–201, next to Hippocrates the greatest physician of antiquity) was not the officinal flat, punched-out lozenge of present-day pharmacists, but it was a small globe or ball, may be of soap, may be of sugar, a pastille sometimes, in the sense of being a medicated "drop" of sweet confectionery. To some such ball, as a medicinal vehicle of frequent use, medicine may now well return and find therein abundantly suggestions of therapeutic usefulness. For such purposes I suggest the assimilation into medical practice of the excellent pharmacological basis afforded us by the popular modern sweetmeat known as the "chocolate cream."

Ten years ago I published a paper on medicated lozenges,[1] and seven years ago I included a revised and extended version of the same paper in a book of mine upon subjects in a physician's practice, addressed to my medical brethren.[2] My present suggestion is an outcome of my continued and further attention to this very useful mode of medication in my therapeutic work. Surely the prescriber who ordains an efficient and grateful trochiscus will well fulfil the third article of a very authoritative precept of medical practice—namely, *curare cito, tuto, et jucunde.* Horace's apostrophe, "*qui miscuit utile dulci*"[3] may be held of a physician who can prescribe in his own magistral formula—that is, in a formula which is appropriately varied accordingly as he finds the individual therapeutic indications afforded by each particular patient—a skilfully medicated trochiscus, combining efficient remedies in the pleasing form of a delectable sweetmeat.

Many, indeed, are the remedies which an experienced and experimented prescriber may choose for exhibition in such a form of trochiscus, and so for direct application through the agency of that vehicle to the mucous membranes, and even to the deeper parts, of the lips, mouth, tongue, fauces, nares, throat, œsophagus, stomach, and further on in the alimentary canal, and of the respiratory passages below the pharynx, and also for their general as well as their local physiological actions and therapeutic effects. In many maladies of the oral cavities, fauces, tonsils, uvula, velum palati, pharynx, gullet, in some diseases affecting the larynx, in some bronchial and in some other pulmonary disorders, and in some other morbid conditions which may indicate the accurate exhibition of drugs (all of which conditions can alone be contra-distinguished by the fully trained member of our faculty), the basis and form of a trochiscus supply to us a convenient, agreeable, and effective vehicle for our particular selection from a large repertory of remedies.

It may be useful to recall that we owe our present therapeutic use of "lozenges" largely to the old Edinburgh Pharmacopœia. Early in the century last past that veteran therapeutist, Dr. Paris, declared that "trochisci, troches, or lozenges" were then generally regarded as objects rather of the art of the confectioner than of that of the pharmacist, and so neither the London nor the Dublin Royal College of Physicians condescended to notice them, while the Edinburgh Pharmacopœia gave several formulæ for their preparation. Dr. Paris held such preparations as undoubtedly useful in medical practice, not only in the officinal forms but also in certain magistral combinations, for which latter he published some valuable suggestions in his classical Pharmacologia. Since his time many clinical considerations, based upon advances in our knowledge in physiology and in pathology, and the employment of certain improved diagnostic instruments of visual research, have enlarged the use of medicated trochisci. The British Pharmacopœia gives 17 formulæ for trochisci, these medicaments being made up variously with a "fruit basis," with a "simple basis," with a

[1] Brit. Med. Jour., Nov. 30th, 1901.
[2] Contributions to Practical Medicine, fourth edition, 1904.
[3] De Arte Poetica, l. 343.

"rose basis," or with a "tolu basis." Besides these officinal preparations, many others of a like kind are to be found in our hospital pharmacopœias, while there are many others in popular use, some of them of secret composition, and some of them under proprietory exploitation, with all its baneful consequences.

In my present communication, as in others I have made upon the subject, I aim at encouraging my professional brethren to prescribe medicinal trochisci in their own magistral formulæ, and I desire to draw their attention to a new vehicle of the kind which I have found useful in practice—namely, the "chocolate cream." As we know, chocolate is made by triturating in a heated mortar the roasted seeds of the Theobroma cacao, freed from their husks, with an equal quantity of sugar (saccharose), and making the mixture into a paste with water, having flavoured it variously, as with vanilla or with cinnamon, and the "cream" is made by filling a small globular envelope of this mixture with a small portion of milk which has been mixed with sugar and evaporated by the aid of fire to a pasty consistency. It is this latter paste which should be medicated from our prescriptions by the pharmacist. Some skilful members of the craft have succeeded well in carrying out my own wishes to such purpose. Such medicated trochiscus we may prescribe, for example, thus:—

℞ Menthol, gr. $\frac{1}{10}$.
Ol. eucalypt., m$\frac{1}{2}$.
Pastæ lactis,
Pastæ nuclei cacao, āā q.s.
Fiat trochiscus, sec. artem.

Or the pasta lactis in each trochiscus may be medicated by the addition to it of a grain or two of borax, or half a grain of sulphate of zinc, or a minim of oil of turpentine, or of oil of cajuput, or half a minim of oil of anise. The various clinical indications for the choice of these and of other medicaments which may be exhibited in the vehicle I now propose are well known to our profession and are alone distinguishable by one of us, so that any enumeration of the symptoms which suggest the use of such remedies is unnecessary in any communication from me, and in the public interest, for reasons which will at once occur to us, such enumeration would be undesirable.

Perhaps the trochisci I have now described might be called cremules and, Latinised, cremulæ When quickness of preparation is to be wished for unmedicated ones can be medicated readily by remedies which are liquid in their form, by injecting a minim or so of the medicament into the centre of a "simple" cremule, by the aid of a hypodermic syringe.

Birmingham.

Reviews and Notices of Books.

Geschichte der Medizin (*History of Medicine*). By Dr. MAX NEUBURGER, Professor of the History of Medicine in the Imperial and Royal University of Vienna, &c. Vol. II., Part 1, second half. Stuttgart: Ferdinand Enke. 1911. Pp. 233–528. Price M.8.20, or 8*s.* 3*d.*

THIS instalment of Professor Neuburger's excellent History of Medicine deals with a conspicuously barren period in the existence of the healing art—a period for the most part of apparent retrogression rather than of progress. Nevertheless, it is interesting to trace the rivulets derived from Greek and Arabic sources which trickle through the dreary morass of darkness and superstition.

After a few pages devoted to Celtic and ancient German medicine, the author proceeds to deal with the art as it existed in the early Middle Ages. Throughout the greater part of Europe medicine was chiefly practised at this time by priests and monks, but in some parts, notably in Southern Italy, lay practitioners were not extinct, and the seeds were kept alive which were some centuries afterwards to develop into the School of Salerno. A name of note at the beginning of the sixth century is that of Anthimus, who exhibited some originality of thought and wrote sensibly on the regulation of diet in disease. It was a time of war, pestilence, and famine, in which the cloister alone afforded a safe asylum for any kind of learning; and in default of possibilities for research we must be grateful to the monks for their services in copying and handing down to us the works of the great writers of earlier times. Among the preservers of medical writings must be noticed Cassiodorus, who was first a statesman and then a monk, and Benedictus Crispus, a bishop who about the beginning of the eighth century wrote in bad Latin hexameters a compilation of remedies. Monkish medicine, however, naturally tended to superstitious observances, worship of relics, and miracle-working. In the South of Italy study of the later Latin writers on medicine prevailed and the construction of medical epitomes was much practised in the eighth century. Some of the rules for the visiting of the sick and for the management of the patient and his friends drawn up at this period have a curiously modern air. Under Charlemagne the foundation of hospices and infirmaries for the sick was encouraged, and the medicine of his reign is associated with the name of Alcuin, who carried on the traditions of the Anglo-Saxon school, which had been adorned some half century before by the Venerable Bede. In the tenth century a school of some note existed at Chartres, and medicine was largely practised by Jewish physicians. Lepers were segregated, mainly on religious grounds, and exorcism was frequently practised.

The eleventh and twelfth centuries saw the rise to eminence of the celebrated school of Salerno, famous among whose teachers were Gariopontus, Petroncellus, Alphanus, and Trotula—the last of whom is called "*sapiens matrona*," a learned lady. Little was done in these times in the way of extending scientific knowledge, but the ancient authors were studied and translated, and compendia were made for practical use. In the twelfth century we find various forms of madness recognised as diseases of the brain and assigned to affections of different parts of this organ, while the surgical skill attained by some members of the school of Salerno is shown by the advice to suture the ends of divided intestine over a hollow cylinder of elder wood. Schools of less note flourished also at Bologna and Montpellier. A distinguished scion of the latter was Arnaldus of Villanova, who appears to have been, not only a learned man, but a sensible physician. Gradually, however, during this century the growth of scholasticism and formalism submerged all original thought. The worship of Aristotle as an infallible authority left no room for personal observation, and throughout the fourteenth century stagnation everywhere prevailed. Even when the opportunities for fresh knowledge occurred, as in the revival of the practice of human dissection, the desire to confirm the accepted doctrines precluded accurate observation and scientific advance. In medical practice inspection of the urine was the main diagnostic measure, and bleeding and purgation were the chief methods of treatment. The belief in astrology took the form of placing various regions of the body under the influence of different constellations, and figures illustrating this superstition accompany those showing the superficial veins suitable for venesection in the manuscripts of this epoch. Some of these curious figures are reproduced in Professor Neuburger's book.

It is greatly to the credit of the learned author that he succeeds in retaining the reader's interest in his account of the fortunes of medicine during the depressing period which is dealt with. The book is in every respect worthy of its predecessors, of which we have expressed on former occasions our high appreciation, and we look forward with keen expectation to the appearance of the concluding volume or volumes of this most scholarly and authoritative History of Medicine.

Regimen Sanitatis: The Rule of Health. A Gaelic Medical Manuscript of the Early Sixteenth Century, or perhaps older, from the Vade Mecum of the famous Macbeaths, Physicians to the Lords of the Isles and the Kings of Scotland for Several Centuries. By H. CAMERON GILLIES, M.D. Printed for the author by Robert Maclehose and Co., Limited, University Press, Glasgow. 1911. Pp. 139.

To Dr. H. Cameron Gillies thanks are due for this most interesting and admirably got-up book, which is the first definite effort to restore to the light the Gaelic medical manuscripts which have so long lain mouldering in oblivion. *Regimen Sanitatis* (or the Rule of Health), an old Gaelic medical manuscript of 62 vellum folios, was discovered in the British Museum by Dr. Gillies. It belonged to John Macbeath (his name may be taken as representative of the whole family, others doubtless contributing), who kept a note-book, or *Vade Mecum*, in which he jotted down the sum and essence of his reading of all that was best in the medical literature of Greece and Rome and Araby, mingled with his own comments and observations, which were based on a wide personal experience. This note-book was set down in the Scottish Gaelic of the time (the early sixteenth or even fifteenth century). It was never intended for publication, but was simply a sort of practical *liber memorabilium*, such as is kept by many modern members of the medical profession. MacBeath gave his manuscripts over to a professional Irish scribe—Aodh O'Cendainn—so that the substance might be written in the best and most compact form, and that is how they are now extant—thanks to Dr. Gillies. The MacBeaths seem to have read the best that was available in their time, and in their writings we meet such names as Avicenna, Averroes, Joannes de Vigo, and Hippocrates.

Part of the text of the *Regimen Sanitatis* is based upon *Rosa Anglica seu practica medicinae*, a work written by John of Gaddesden, who was taught in the Montpellier School and who was a graduate in medicine of Merton College, Oxford, and a Court physician. The *Rosa Anglica* was so popular that it was reprinted up to the end of the sixteenth century. The substance, and indeed the essential character, of the *Regimen Sanitatis* is based upon the famous rhyming Latin poem—a popular work intended for the laity—by Joannes de Meditano, *Regimen Sanitatis Salerni*. It is said that William of Normandy (afterwards William the Conqueror) went to the famous medical school of Salerno—nicknamed "Civitas Hippocratica"—in search of health, and this book by Meditano, which had an immense reputation in the Middle Ages, being translated into most European languages, was addressed to Robert, son of William the Conqueror—"Anglorum Regi." Hali's Compendium, which Constantinus Africanus of Carthage, who studied at Monte Cassino, rendered under the title of *Pantegni*, is referred to in this Gaelic manuscript; and undoubtedly the MacBeaths were greatly influenced by an important work which they possessed—*Practica seu lilium Medicinae* of Bernard Gordon, a Scottish teacher at Montpellier in the early part of the fourteenth century. The MSS. of the *Regimen Sanitatis* are shown in Dr. Gillies's monograph beautifully photographed, and there are an accompanying translation and most useful notes and a glossary. They deal with such questions as the regulation of the health, the quantity of the food, the eating of food, the times of eating, and the age and temperament, and are full of wisdom. The great interest of the book lies in the fact that it shows that away back in the fifteenth and sixteenth centuries there were physicians and scholars in the far north and in the western isles of Scotland who were men of profound practical experience themselves, and who, in addition, had a thorough knowledge of all that was best in the ancient Grecian, Roman, and Arabian medical literature.

Dr. Gillies is to be heartily congratulated on having produced a work which has been to him a labour of love.

What Shall I Eat? By Dr. F. X. GOURAUD, Formerly Chief of the Laboratory of the Medical Faculty of Paris. Translated by FRANCIS J. REBMAN. London and New York: Rebman, Limited. 1911. Pp. 379. Price 6*s.* net.

THIS book is an attempt to tell us what we should eat, drink, and avoid, both in health and disease. Its sub-title is "A Manual of Rational Feeding." There is much that is interesting in the work, but the physician will have to read a little between the lines and be careful not to accept all its dicta. The author mentions in succession each article of food, e.g., meat and its varieties, fish, milk and its products, fats, eggs, cereals and their products, legumes, potatoes, vegetables, fruits, condiments, and what he calls "nerve foods," and winds up with short chapters on beverages and vegetarianism. He mentions the chief characters, composition, and uses of each food, its action on the digestive and other organs, and gives the indications for or against its use in health and disease. We do not think that the translator has been altogether successful in conveying the meaning of the author if we may judge by a few examples. "The nitrogen of beef is composed of albuminoids—i.e., myosin, myostroin" (p. 21); "The extravagant content of nitrogen forms the generation of microbes" (p. 29); "Nitrogen forms a splendid breeding ground for intestinal bacteria"; urea is "the issue of albumin" (p. 33); meat "wears out the parenchyma of the liver"; while brain, we are told, is a "food for rephosphoratisation." Under the head of Juices of Meat we find: "There is a larger number of commercial articles which are prepared in ever so many different ways, the principal advantage of which is simply one of commodity." There are some strange inconsistencies. We are told that "The Japanese live almost exclusively on fish, and but rarely eat meat," and a little later (on p. 177), under the head of "Rice": "We may at once claim that the Russo-Japanese war was the triumph of rice over rye." Fish itself is a "rephosphorating food," while milk is "essentially a living food," and is said to contain "yeasts." What is one to make of the following cryptic sentence? "The habit of finishing every meal with a bit of cheese often enough proves fatal to men of the world" (p. 138). The well-known French word *apéritif* is rendered by the word "aperient"—a very different affair. The translator has added a glossary in which we find "Ternary bodies" defined as "the fats, albumins, and carbohydrates of any food." We cannot agree with the enthusiastic translator's implication that the book deserves a place on the reference book-shelf of every medical man. There is a copious index of the diseases referred to in the text, and a short preface by Professor Armand Gautier of Paris.

Practical Photo-Micrography. By J. EDWIN BARNARD, F.R.M.S., Lecturer in Microscopy, King's College, London. Illustrated with 79 figures in text and 10 plates. London: Edward Arnold. 1911. Pp. 322. Price 15*s.* net.

PHOTO MICROGRAPHY now embraces a wide range of subjects, more especially in histology, bacteriology, and pathology; and in recent years petrology and metallurgy are the latest fields for its application. There is, therefore, ample room for a text-book dealing with this subject, and it is with pleasure that we welcome the excellent treatise of Mr. Barnard. To become expert at the work the operator must master the use of the microscope, and know the optical

principles of its construction as well as the technique of pure photography. To these ends the author devotes several chapters to the general construction of a microscope, its optical equipment—objectives and oculars (emphasising the fact that it is advisable to purchase these only from the makers of highest repute), substage condensers, and illuminating apparatus, second only in importance to the lenses themselves. Illuminants are next dealt with, and the importance of electrical illuminants is pointed out. The various forms of photo-micrographic cameras are described and amply illustrated. Here we would point out the great importance of the use of dark-ground illumination, as, for example, by the use of a parabolic reflector, in instantaneous photography of living bacteria, trypanosomes, and spirochætæ, an art that has recently been applied by Dr. Comandon to cinematography. Chapters follow on the use of the microscope and its several parts, and above all in photography the necessity for preventing vibrations. As in photographing microscopic objects colour screens are almost invariably necessary a full account of their nature and use is given, together with an account of the various photographic plates on the market. The plate having been exposed, the next stage is the development of the negative, which does not differ from the method used in ordinary photography. Some special processes are then described—e.g., how to use ultra-violet rays, photography of metals, of cultures of bacteria, and the production of lantern slides by the three-colour process of Sanger-Shepherd, the autochrome, the "Thames" and Dufay colour processes. There is no coloured plate to show what can be done by these methods. The last chapter is devoted to the description of "some progressive examples" of the ten plates, which include illustrations of sections of stems of plants, of foraminifera, scalp, tongue, medulla oblongata, bacteria, trypanosomes, pus and gonococci (× 1500), yeast, typhoid bacillus, surfaces of metallic alloys, &c. There is a useful appendix, which includes a list of books of reference (exclusively English however); there are no references to French or German publications. The work will prove most useful to all who practise a fascinating art and a most valuable branch of scientific technique.

Diseases of the Skin. By JAMES H. SEQUEIRA, M.D. Lond., Physician to the Skin Department and Lecturer on Dermatology at the London Hospital. With 44 plates in colour and 179 other illustrations. London: J. and A. Churchill. 1911. Pp. 539. Price 25*s.* net.

Dr. Sequeira is to be congratulated on having produced so excellent a text-book on skin diseases. The volume answers all the tests demanded of a satisfactory text-book for students and practitioners. It is clearly written in a simple, restrained style; the descriptions of the various diseases are vivid and systematic; throughout there is abundant evidence of careful selection and pruning. The author has avoided the common error of dealing too lengthily with certain diseases in which he takes a special interest, and dismissing others too abruptly. This cardinal virtue is attained only by teachers of conscientious and methodical habit; and perhaps its presence in this text-book is explained by the first words of Dr. Sequeira's preface: "The book began with notes for a course of lectures delivered in the Skin Clinic at the London Hospital in 1902, and has gradually grown with the experience of nine years' teaching."

The chapters of the book have been arranged as far as possible on etiological lines, but in many instances this has been replaced by a morphological classification, as is usual in the majority of dermatological works. The list of contents and the index overcome most of the difficulties that arise from the classification; but the failure of all classifications to meet practical problems of diagnosis can always be detected by the reader who seeks for it. To mention one example, folliculitis decalvans is described on page 166, under Microbic Affections of the Skin, as an infection of the hair follicles of the scalp, while the not dissimilar condition, Brocq's pseudo-pelade, is described on page 502 under Diseases of the Hair. Cross references in the paragraphs on diagnosis are the only means at present of diminishing these difficulties caused by imperfect knowledge, and hence by imperfect classifications of skin diseases. As an example of Dr. Sequeira's concise brevity in description we refer our readers to his clear *résumé* of the X ray treatment of ringworm, and to his admirable chapter on Seborrhœa. We are glad to see at last in an English text-book a complete, though brief, presentation of Dr. Sabouraud's illuminating researches on the true nature of pityriasis and seborrhœa.

We have rarely seen better coloured plates, which, with a few exceptions, are from the author's own cases, taken by Dr. Arnold Moritz direct in three colours from the patients; and the black and white illustrations are equally good. Among the 179 illustrations, that of molluscum contagiosum is one of the few that fail to give a life-like representation, which in some of the serious cases is positively startling. The value of the book is enhanced by three appendices on mineral waters and spas, on drugs useful for the internal treatment of skin diseases, and on formulæ for local applications of ointments and lotions, baths and powders. There are a number of useful references throughout the book—an uncommon feature that will prove of great value to students who desire to follow up in detail any subject that particularly interests them.

JOURNALS AND MAGAZINES.

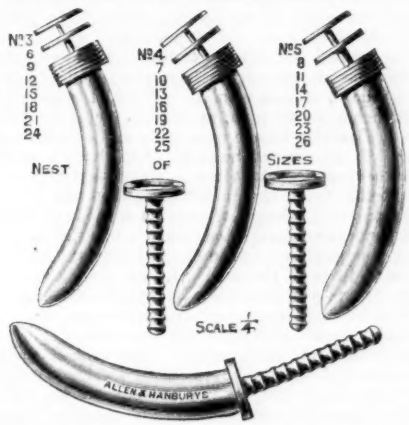
Journal of Pathology and Bacteriology. (Official Organ of the Pathological Society of Great Britain and Ireland.) Vol. XV., No. 4. Published from the Department of Pathology, University of Cambridge. Price 7*s.* 6*d.* Yearly subscription, £1 1*s.*—In observations on animals showing the symptoms of the disease called "distemper," Dr. J. P. McGowan of Edinburgh isolates constantly from the nose, pharynx, and trachea of men, monkeys, ferrets, goats, guinea-pigs, rabbits, and especially from cats and dogs suffering from symptoms resembling those of "distemper," a short Gram-negative, slightly motile, flagellated bacillus, sometimes nearly a coccus, and growing in chains in broth and in the infected tissues; neither involution forms nor spores have been observed. The organism grows well on ordinary media and forms a yellowish-brown thick growth on potato; in media containing dextrose and other carbohydrates and in litmus milk there is a marked production of alkali. The organism grows well without liquefaction on gelatin, and there is no formation of indol. Cultures of the organism were pathogenic to dogs, cats, and other animals on intraperitoneal inoculation, and when applied to the nasal mucous membrane of healthy dogs can set up the clinical symptoms of "distemper." Dr. T. Addis of Edinburgh writes on the Pathogenesis of Hereditary Hæmophilia. As the result of a very careful series of quantitative experiments with solutions of fibrinogen, thrombin, and prothrombin, prepared from normal blood and from the blood of well-marked cases of hæmophilia, and with thrombokinase solutions prepared from human tissues, the author comes to the following conclusions regarding the share which each of these factors has in causing the delayed coagulation of hæmophilic blood. Fibrinogen is present in hæmophilic blood in normal amount and is readily coagulated. The amount and activity of calcium, prothrombin, and thrombokinase, in hæmophilic blood are normal. As regards the thrombin, there is in hæmophilic blood

a marked delay in its formation, though in the end as much is formed as in normal blood. This delay in the formation of thrombin in the shed blood, he maintains, is proportional to the retardation of coagulation, of which it is the cause, and is not due to deficiency of thrombokinase. There is no difference in the amount of antithrombin in normal and hæmophilic bloods. Professor D. A. Welsh of Sydney, in a note on the positive and negative phases of coagulation of blood in man, recalls the observation of Wooldridge, that injection of tissue extracts (thrombokinase) may cause intravascular clotting (positive phase). He holds that these phenomena may be reproduced in man in disease associated with cellular disintegration and leucocytosis. The white fibrin thrombi in the heart and pulmonary artery, which are common in pneumonia and leukæmia, are formed during life and represent the positive phase. They are a cause of death rather than the results of dying. Dr. M. A. Ruffer, of Alexandria, in a paper on arterial lesions found in Egyptian mummies, dating from 1580 B.C. to 525 A.D., records that the lesions of advanced atheroma are common and present the same features, on microscopical examination, as do present-day specimens. Among the suggested causes of atheroma, tobacco and syphilis may certainly be excluded, probably also alcohol, hard muscular work, and an excessive meat diet. Dr. T. R. Elliott of London and Mr. R. G. Armour of Toronto, in a paper on the development of the cortex in the human suprarenal gland and its condition in hemicephaly, maintain that the large size of the human suprarenal gland during fœtal life is due to the presence, between the cortex and medulla, of a mass of tissues which resembles cortex but does not contain any doubly-refracting fatty material. This "fœtal" cortex appears at an early stage and persists till birth. After birth it undergoes fatty change and rapidly degenerates until at the end of the first year it has usually disappeared. It has not been found in animals, and appears to be peculiar to man. It was absent in the small suprarenals of a case of hemicephaly. Professor H. Seidelin, of Merida, Mexico, under the title "Epidermoidal Metaplasia in Ureter and Pelvis of Kidney," records the occurrence of stratified squamous epithelium in the pelvis and ureter, asssociated with numerous small calculi and ulceration. Dr. A. G. Anderson of Aberdeen describes a case of psammo-carcinoma of the pancreas. This was a tumour arising in the head of the pancreas, with a well-marked alveolar structure and showing numerous calcareous nodules made up of concentric layers. These psammoma bodies were present in the neighbouring glands, but not in the metastatic growths in the liver and lung, and arose apparently by degeneration of the carcinoma cells. Dr. Carey Coombs of Bristol, in an article on the microscopic or "submiliary" nodules of active rheumatic carditis, states that active cardiac rheumatism is constantly associated with the presence of small inflammatory foci in the muscle and serous membranes. These foci consist of fibrin, lymphocytes, and characteristic large cells which are often multinucleated. They are not found in other forms of infective carditis, and appear to be characteristic of rheumatic endocarditis and pericarditis. They are most abundant in the left ventricle and are rare in the auricles. In structure they appear to be identical with the subcutaneous rheumatic nodules. Dr. J. O. W. Barratt of Liverpool, in "The Modelling of Mitotic Forms," shows how accurate and instructive models of the chromosomes in dividing cells may be made by making plans of the dividing nucleus in the successive planes formed by using the fine adjustment of the microscope. From these, wax models magnified 12,000 times are prepared and mounted on a wire frame; from these, again, permanent wooden models are constructed. Professor I. Walker Hall of Bristol gives a short account of some valuable observations on the bone marrow of the humerus made by the late Dr. F. F. Leighton, who classified the bone marrow of 63 cases under seven headings according to their naked-eye appearances—appearances which accorded well in almost every case with definite microscopical "findings."

New Inventions.

"NESTED" UTERINE DILATORS.

THE accompanying woodcut well illustrates a new form of uterine dilator which has been made for me by Messrs. Allen and Hanburys, Limited, of 48, Wigmore-street, London, W. The set is so arranged that the smaller sizes telescope into the larger instruments, with the result that when "nested" the 21 dilators form three pieces with accompanying handles. The main objections to all dilators which have hitherto been made on this principle are their great weight and considerable bulk. The present set of "nested" dilators, however, is



eminently portable and comparatively light. In actual practice I find one handle sufficient, since when one size is inserted the handle is detached and rapidly fitted to the next number, and the smaller instrument withdrawn as the larger one is ready to insert. The principle on which the handle is fitted or detached is simple and rapid, and when the handle is adapted for insertion its stability and mechanical advantage are superior to those of the double-ended instrument.

BRYDEN GLENDINING, M.B., M.S. Durh., F.R.C.S. Eng.
Devonshire-place, W.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. Killian of Freiburg, whose name is well known in connexion with bronchoscopy, has been appointed to the chair of Laryngology, in succession to Dr. Fraenkel. Dr. Th. Weil of Charlottenburg, author of many works on hygiene and technology, has been granted the title of Professor.—*Bordeaux:* Dr. Pachon, *agrégé*, has been appointed Professor of Physiology, in succession to Dr. Jolyet.—*Breslau:* Dr. Richard Stumpf of Königsberg has been appointed First Assistant in the Pathological Institute, in succession to Dr. Winkler who goes to Posen. Dr. Hermann Küster has been recognised as *privat-docent* of Midwifery and Gynæcology, and Dr. Karl Fritsch as *privat-docent* of Surgery.—*Cracow:* Dr. Sigismund Radlinsky, Assistant to Professor Kader has been recognised as *privat-docent* of Surgery.—*Erlangen:* Dr. von Liebermann has been recognised as *privat-docent* of Physiology.—*Gratz:* Dr. Karl Potpeschnig has been recognised as *privat-docent* of Children's Diseases.—*Montpellier:* Dr. Vires, *agrégé*, has been appointed Professor of Therapeutics and Materia Medica, in succession to Dr. Hamelin.—*Munich:* Dr. Hugo Kaemmerer has been recognised as *privat-docent* of Medicine.—*Paris:* Dr. Paul Teissier, *agrégé*, has been appointed Professor of Internal Pathology in succession to Dr. Dejerine. Dr. Letulle, *agrégé*, has been appointed to the chair of the History of Medicine and Surgery, in succession to Dr. Chauffard. Dr. Weiss, *agrégé*, has been appointed to the chair of Medical Physics, in succession to Dr. Gariel.

THE BRITISH MEDICAL ASSOCIATION.

SEVENTY-NINTH ANNUAL MEETING IN BIRMINGHAM.

THE SECTIONS.

MEDICINE.

THURSDAY, JULY 27TH.

President, Dr. A. H. CARTER (Birmingham).

Dr. W. HALE WHITE (London) opened a discussion on

Obscure Cases of Fever without Physical Signs.

He pointed out that as means of investigation became more numerous the cases in which we cannot explain the cause of pyrexia would be fewer. For example, the X rays now helped us to recognise deep-seated pus, and an agglutination reaction taught us to detect typhoid fever in those in whom the cause of the pyrexia might formerly have been overlooked. Mouth temperatures might be misleading, since if the patient had been breathing cold air the thermometer would register too low, if there had been much exertion it would register higher than the disease warranted. Bardswell and Chapman had recently shown that a normal individual walking for one hour at four miles an hour raised his rectal temperature to 100·6° F., walking for one hour at six miles an hour he raised it to 103° F. Sometimes the power of the body to maintain its temperature fairly constant irrespective of that of the surrounding air broke down, and then the patient had a sunstroke. This was the best example of pyrexia without physical signs. The influence of external temperature was shown in the fact that the temperature of fevered patients was higher in the hot months than in the cool. It was well known that the majority of cases of rheumatic hyperpyrexia occurred in the months of June, July, August, and September, and Dr. J. H. Bryant had shown that this was also true of most cases of hyperpyrexia from other causes. The younger the patient, the more easily was the thermotaxic mechanism put out of gear; therefore, in infants, the temperature was likely to be raised by very slight causes. Certain chemical bodies were sometimes the cause of pyrexia, and belladonna, cocaine, and β-tetrahydro-naphthylamine were mentioned in illustration. Dr. Hale White referred to some experiments done in conjunction with Dr. J. Fawcett as to the results of injecting the last-named drug into rabbits. In one the temperature rose 9·9° F. The drug probably acted by increasing the production of heat. Excess of carbohydrate food could sometimes lead to pyrexia, and, in illustration, Dr Hale White referred to a case published by Dr. H. Davy,[1] a former President of the Association, who had pointed out that carbohydrate fever must always be thought of in children who have those frequent attacks of pyrexia which were formerly called febricula and are now often erroneously said to be influenza. Fever due to some abnormal body in the intestines might be quite unsuspected until examination of the stools showed the presence of blood and mucus in them. Pyrexia due to disorders of the nervous system was next referred to. Fracture of the spine, especially if in the cervical region, and damage to certain parts of the brain, especially the corpus striatum, would lead to pyrexia. Dr. Hale White described the results of his experiments, showing that damage to the corpus striatum in rabbits produced considerable pyrexia. The importance of the central nervous system in relation to pyrexia was well shown in the study of hyperpyrexia. Dr. J. H. Bryant found hyperpyrexia in 10 out of 258 cases of fractured skull. Dr. Hale White had seen the temperature rise to 107·4° F. in cerebral hæmorrhage, to 107° in cerebral softening, to 108° in cerebral tumour and in delirium tremens, to 108·4° in chorea, and to 109·1° in convulsions. All such cases might be said to be cases of pyrexia without physical signs, and the explanation in all probability was that the disease of the brain had thoroughly upset the thermotaxic mechanism. Cases of hysterical pyrexia were next considered. The possibility of fraud in these cases was mentioned and illustrated by referring to the case of a nurse whose axillary temperature was stated to be 110°, the explanation being that the patient had heated up the axilla by a very hot indiarubber hot-water bottle. Her rectal temperature proved to be normal. Dr. Hale White was of opinion that a survey of published cases showed that some were genuine, and suggested that just as in hysterical paralysis or hysterical convulsions the cerebral motor mechanism had gone mad, so in hysterical pyrexia the cerebral heat mechanism had gone mad. He then gave details of two cases of hysterical pyrexia which he had observed. The importance of the examination of the blood in any case in which the cause of the pyrexia is not obvious was then emphasised. An excess of polymorphonuclear cells would often indicate pus, but was of less clinical value than might be thought, since usually when there was a sufficient increase to confirm the suspicion of pus, this could be detected by other means. Moreover, a considerable quantity of pus might be present without any increase in the number of these cells, and in some diseases such as pneumonia they might be increased without suppuration being present. In some examples of pyrexia—e.g., enteric fever—a leucopenia was present. Sometimes the parasite causing pyrexia could be found in the blood—e.g., in malaria, blackwater fever, sleeping sickness, tick fever, relapsing fever, and filariasis. Again, bacteria might be found in the blood, as in malignant endocarditis. A Wassermann reaction or one of its many modifications might show whether an obscure fever was due to syphilis. The examination of the blood for agglutination reactions helped to a diagnosis in typhoid fever, paratyphoid fever, Malta fever, dysentery due to Shiga's bacillus, and glanders. Dr. Hale White discussed the limitations and fallacies of the agglutination test in enteric fever. He then referred to the estimation of the opsonic index as an aid to diagnosis, more especially when it is suspected that the pyrexia is due to the tubercle bacillus. The cases of obscure fever due to diseases of the blood were then illustrated by reference to pernicious anæmia, Hodgkin's disease, and acute lymphatic leukæmia. The fact that examination of the cerebro-spinal fluid will often yield positive evidence of meningitis before any optic neuritis is discernible was mentioned as of importance in the diagnosis of cases of obscure pyrexia. Dr. Hale White stated that it was probable that the nature of some cases of fever was overlooked when the explanation should be sought in the condition of the urine, which though perfectly free from albumin, blood, and casts might contain streptococci or bacillus coli, to which the fever was due. The most common cases of obscure pyrexia to be cleared up by examination of the urine were those which occurred in pregnancy. Before giving up any case as inexplicable the urine should always be examined bacteriologically. Forgetfulness of the fact that malignant disease may be the cause of pyrexia could lead to mistakes. As a rule the growth was one which was rapidly spreading and of considerable size, or there were many growths throughout the body. Dr. Hale White had several times known a large growth of the liver to be associated with pyrexia for many weeks. Cirrhosis of the liver might be a cause of pyrexia, as was pointed out by Carrington, and a so-called tropical liver might be seen in this country as a cause of fever. Pylephlebitis and inflammation in connexion with the biliary passages must also be remembered as possible causes. Dr. Hale White believed that mistakes were most often made about obscure pyrexia by failing to discover deep-seated pus, especially in that an empyema after pneumonia was regarded as chronic pneumonia or tuberculosis. Pus in connexion with the teeth, the antrum, and the cavities of the nose was often difficult to find, and so also was that of a small subdiaphragmatic abscess. A retro-pharyngeal abscess might be overlooked, and pyrexia after an operation thought to be caused by pneumonia might really be due to suppuration in connexion with the wound. Malignant endocarditis was perhaps the next commonest cause of difficulty, and the pitfalls in the diagnosis of this disease were discussed. Failure to examine the urine bacteriologically was probably the next most common cause of non-success. Next on the list of difficulties Dr. Hale White placed obscure pyrexia due to tuberculosis. He pointed out the importance of repeated examination of the sputum or urine in such cases and discussed the value of X ray examinations and of the tuberculin tests in this connexion. Enteric fever and paratyphoid fever must also not be forgotten.

Sir WILLIAM OSLER (Oxford) divided the causes of pyrexia

[1] THE LANCET, vol. ii., 1904, p. 882.

of obscure causation into three chief groups: (*a*) neurotic, (*b*) infectious, and (*c*) those due to obscure unrecognised tumours. The first group was not a large one. He referred especially to cases in fat children and in young people at puberty. In the second group unrecognised tuberculosis accounted for a good proportion. In latent tubercle there was often slight transient fever without physical signs. Tuberculous glands were not always detectable in children, and might cause fever lasting for weeks. Fever due to chronic septic endocarditis was another example to be included in this group. It might continue for months without observable physical signs, either cardiac or otherwise. A useful hint in regard to these cases was sometimes given by the appearance of ephemeral nodes on the fingers and toes like an urticarial wheal. Syphilis was also sometimes associated with fever of obscure origin. Gummata in the liver were often present in such cases. Colon bacillary infections of the urinary tract were then referred to, and their characters were outlined. Such conditions were common in pregnancy and during childhood. Vaccine treatment of these cases in his experience had not been very successful. In the tumour group of causes he referred to cases of Hodgkin's disease and to latent obscure sarcoma of the retroperitoneal tissues and liver.

Mr. E. C. HORT (London), after outlining his views as to the genesis of fever and to the doctrine of the unity of fever, which is based on the observation that in man fever follows cell destruction, proceeded to classify cases of fever under three headings: (1) Those cases due to absorption of foreign products; (2) those due to absorption of native products; and (3) unclassed fevers, a group which contains very few cases, such as the fever due to hysteria. In endeavouring to elucidate the cause of fever it was therefore necessary to eliminate one by one all possible causes of cell destruction, including the infections. He illustrated his remarks by a diagram and gave a table classifying fevers on the principles outlined.

Dr. E. HOBHOUSE (Brighton) in his remarks described a physiological fever in children due simply to ordinary metabolism being hastened. It was desirable to make prolonged observations in children. He believed that fever in syphilis was commoner than Dr. Hale White suggested, and it could occur in tertiary and hereditary conditions Cirrhosis of the liver might also cause disturbance of temperature. He also referred to latent tuberculosis, erythema nodosum, and bacilluria in children. He had not found vaccines successful in his experience of the last-named condition. Some cases of fever were not even explained after post-mortem examination.

Dr. W. J. TYSON (Folkestone) emphasised the importance of sex and age in regard to the question under discussion, conditions which he thought had not received sufficient notice by previous speakers. The temperature in the female was, as a rule, higher in disease than that of the male, perhaps by a half to one degree. In children the temperature was considerably higher than in the adult and was raised by comparatively slight means. He alluded to the effects of indigestion of various kinds of food in children.

Dr. C. A. HAWTHORNE (London) said he thought the field of pyrexia had been so thoroughly explored in the discussion that it would be difficult to imagine "unexplained pyrexia" as an appropriate subject for the Section to consider for many years to come. One more precaution might be added to those mentioned by Dr. Hale White—namely, the necessity for the use of a thermometer of guaranteed accuracy; this, of course, applied to subfebrile rather than to severe febrile temperatures. He put in a plea for the recognition of rheumatism as among the possible causes of pyrexia occurring apart from physical signs or other objective evidences of local disease. No doubt in many cases of rheumatic fever there was so close a correspondence between the extent and severity of the polyarthritis, on the one hand, and the height of the temperature record, on the other, that it was common to accept the view that the relationship between the two was that of cause and effect. But manifestly it was quite consistent with the facts to hold that both events, the pyrexia and the arthritis, were results of a common cause, and if this were granted it must be recognised that theoretically at all events the one might occur apart from the other. Further, it was noteworthy that unexplained pyrexia was more common in children than in adults, and especially in "neurotic" children. But it was in children particularly that rheumatism tended to assume a non-articular form, and children with a rheumatic inheritance were prone to be "neurotic." It seemed possible, therefore, that fever might, at least in children, sometimes be the sole evidence of rheumatism.

Dr. T. STACEY WILSON (Birmingham) was of opinion that rheumatism was not essentially a joint disease. Certain organisms found their final nidus in the tissues and fluids of joints where the alkalinity of the fluids was lessened. The effect of the salicylates in removing this condition might account for their efficacy in rheumatism. He also mentioned rat-bite fever and gastric ulcer as examples of obscure pyrexia.

Dr. R. D. RUDOLF (Toronto) drew attention to the question of the level of the normal temperature when taken in the ordinary way and referred to the statement of Wunderlich that the normal levels lay between 97·2° and 98·8°. In some observations upon a number of students Dr. Rudolf had found that the average temperature in the morning was 97·4° and in the evening 97·6°.

Dr. C. H. MELLAND (Manchester) expressed his desire merely to underline a few of the points which Dr. Hale White had dealt with in his very exhaustive paper. It was a very common error to diagnose malaria in any obscure case of fever if the patient *at any time of his life* had ever had malaria or lived in a malarial country. Acute leucocythæmia was another cause of obscure fever which he believed to be more common that was usually recognised. It sometimes occurred without any enlargement of lymphatic glands or of spleen to draw attention to it, and though an examination of the blood should demonstrate the nature of the fever it was not uncommonly omitted. And, indeed, in some cases, though it might sound paradoxical, there was no increase in the number of leucocytes, at any rate until the very last stage of the disease. With regard to ulcerative endocarditis, Dr. Melland suggested that during the last ten years this disease had to a large extent changed in type. Instead of being an acute disease running its course to a fatal ending in a few weeks and with well-marked signs of cardiac trouble, it had become a very chronic febrile affection, lasting many weeks or months, with constant or recurrent periods of infection, but often with very few symptoms or physical signs to draw attention to the heart.

Dr. WILLIAM HUNTER (London) would distinguish between the disease and the fever accompanying it. He divided the causes of fever into two main groups: (1) the non-infective and (2) the infective, the latter group being subdivided into specific and non-specific. Any part of the alimentary tract might become the source of infection.

Dr. HALE WHITE replied.

SURGERY.

THURSDAY, JULY 27TH.

President, Sir THOMAS F. CHAVASSE (Birmingham).

Mr. H. ALEXIS THOMSON (Edinburgh) opened a discussion on

The Technique of Wound Treatment.

He commenced by saying that surgeons are all agreed that it is essential to exclude micro-organisms from wounds, but the methods to be employed are still open to discussion. Different surgeons showed more uniformity in the results they obtain than might have been expected from the diversity of methods. The thorough carrying out of any method and the personal factor are of the chief importance. There is no such thing as an aseptic method; it is the result which should be aseptic. In comparing different methods it is very desirable that we should trust not to general impressions but to exact statistics of large numbers of cases. As to the means of sterilisation, they are more often wanting in efficacy than is usually thought. Even when sterilisation of dressings by heat is employed, it is desirable to employ one of the capsules devised for the purpose, which can show that the temperature in the middle of the dressing has been sufficiently high. If sepsis should occur during the operation, it is necessary either to return the instruments to the steriliser or to keep them in an antiseptic solution. For the sterilisation of catgut we have better methods than formerly, but it must not be forgotten that iodised catgut causes more exudation from the tissue than does simple catgut, and drainage may be needed. It is a good test of the thoroughness of a

surgeon's method if he can employ buried silk. As to the hands, there is a large consensus of opinion in favour of dehydration by alcohol, but it is very important that the surgeon should never allow his hands to become septic. The wearing of gloves is a personal matter; and it must not be forgotten that surgeons can obtain unsurpassed results without gloves. If a surgeon never uses gloves he must get his hands infected sometimes, while if he uses gloves only occasionally, as in septic cases, he will find them a great handicap. Some surgeons may be more dangerous with gloves than without them. It must be remembered that the use of gloves does not remove the necessity for the sterilisation of the hands. With regard to the skin of the patient, dehydration by alcohol is the most satisfactory method, and it acts not by killing the germs but by fixing them on the skin and so nullifying their action. The results of the use of alcohol are equal to those of any other method. The use of iodine for preparing the skin of the patient has at present a great popularity, but if it is employed it is essential that the skin should not be washed just before. Iodine is a more reliable steriliser of the skin than is alcohol alone, though Kocher does not think so. For children the iodine should be used of less strength than for adults, and it should be applied only before the operation, as its excessive use may cause eczema. In adults the iodine should be employed both before and after the operation.

Mr. HERBERT J. PATERSON (London) claimed that for the sterilisation of instruments all surgeons agree as to the value of boiling. During the operation it is better that the instruments should lie in an antiseptic solution, for if they lie in sterile water the water is almost always septic within ten minutes. If catgut is to be properly sterilised it must not be allowed to come in contact with water before it is prepared. Gloves should be sterilised dry, for if they are put on wet the hands are always septic by the end of the operation, and if a puncture of the glove should occur it may cause contamination. For sterilisation of the patient's skin a solution of iodine is the most satisfactory. The best test of the sterile nature of the skin is its condition at the end of the operation and not at the beginning. Out of 22 cases treated with iodine solution only one showed signs of sepsis at the end of the operation.

Mr. G. P. NEWBOLT (Liverpool) considered that the use of gloves became natural to a surgeon after a little use; and he employs them always, except for enucleation of the prostate. He has noticed that those surgeons who do not wear gloves employ drainage more than those who do wear gloves. He considered it to be a mistake to operate, except in an emergency, on a patient the day after admission to the hospital, especially when the operation is on the mouth or rectum, where much preliminary cleansing is advisable. He always performs a preliminary tracheotomy in mouth cases, and he never has septic pneumonia. In painting the patient's skin he uses equal parts of the liniment and tincture of iodine, and he is satisfied with the results. As to whether the skin is really aseptic or not he does not care, as it is of no practical importance. He has met with two cases of post-operative tetanus, but he was unable to find any cause. In the sterilisation of the knife boiling in oil gives good results, but it is an expensive method.

Mr. C. A. LEEDHAM GREEN (Birmingham) contributed to the discussion by reading a paper on

An Inquiry into the Value of Sterilisation of the Skin by Iodine.

Little experimental work has been done to test the claims which have been made for iodine as a steriliser of the skin. In estimating the value of any antiseptic it is essential that the antiseptic be neutralised before any attempt at culture be made. Cultural experiments were made with small portions of ligature silk and glass beads infected with various organisms. Alcohol of 70 per cent. strength has more antiseptic power than alcohol of any other strength. Tincture of iodine proved to have the greatest bactericidal power when prepared with 70 per cent. alcohol, and experiment showed that this is not due, as Kutscher claims, entirely to the alcohol, the iodine being a superfluous ingredient. Comparative tests with tincture of iodine (70 per cent. spirit), plain alcohol (70 per cent.), and a watery solution of iodine of the same strength showed that whilst the watery solution of iodine possesses decided germicidal properties, it was less potent than the 70 per cent. alcohol, which in its turn was inferior to the tincture, and this was true even with resistant microbes. Further, it was shown that an alcoholic solution of perchloride of mercury of 1 in 1000 of 70 per cent. alcohol was superior in bactericidal power to the tincture of iodine. Experiments were also made upon the skin, and it was proved that the ordinary preliminary washing of the skin with soap and water is not merely unnecessary but actually harmful; for it does not materially lessen the number of microbes, and by macerating the epidermis it hinders the penetration of the iodine or other alcoholic solution. The question was then examined whether iodine has an exceptional power of penetrating and hardening the epidermis. The penetration is not greater than with other alcoholic solutions of a like strength and the hardening of the epithelium is lost in the presence of blood or albuminous fluids. The alcohol is the chief factor in the hardening, and this hardening is of little value except in short operations. Comparative practical tests on the skin with plain alcohol, tincture of iodine, and sublimate alcohol showed the marked superiority of the two last named, which proved to be powerful skin disinfectants, even after special contamination. A true sterility was never obtained, but both methods always greatly reduced the infectivity of the area. Neither of the two methods can be said in any way to guarantee sterility, for the skin which had proved to be practically sterile directly after the process of disinfection gradually became more and more infective as under the imbibition of fluid the hardened epithelium became loosened. Sublimate alcohol has given the better results, there was a slight superiority even when it was merely painted on the skin, but when it was freely rubbed on, as in the usual method of alcohol disinfection, the superiority was much more marked.

Professor C. F. A. KOCH (Groningen) expressed himself on the whole in agreement with those who had spoken. For two years he used tincture of iodine with good results, but the skin was not aseptic. Very good results in accidental wounds and in compound fractures were obtained by the application of balsam of Peru; the wound may do well even when the skin is very septic; the balsam is simply poured into the wound and it heals up without any real sepsis. He considered it a point of importance that wounds should not be dressed too often. He does not use gloves and yet he does not find it necessary to drain more than those who wear gloves.

Mr. T. S. ELLIS (Gloucester) dealt with the treatment of wounds as wounds. He described a case of very severe burn of the neck and ear, which he had treated by daily pulling of the skin at the lower part of the wound in a direction up and out. When the wound had healed the lower part of the scar was soft and non-adherent, while the untouched upper portion of the scar was firmly fixed and heaped up with keloid. Every amputation stump should be persistently moved to keep the skin supple. Sheet rubber with a rough surface on both sides made the movement of the skin easy and painless.

Mr. C. W. CATHCART (Edinburgh) has the patient prepared the night before the operation. The skin is washed, shaved, and dehydrated with alcohol. In his operations he employs what is often called old-fashioned Listerism. The biological effect of iodine on the skin has not been studied. It can be seen that the skin is abnormally vascular, and it is a question whether the effect is not due to the hyperæmia. For the preparation of catgut, he steeps it in a solution of iodine, made by dissolving one part of iodine in 15 parts of proof spirit; and the catgut so prepared is excellent, it does not rot, and it does not cause an undue amount of effusion. For granulating wounds dry dressings are not good, and packing a sinus every day does definite harm.

Dr. J. M. ELDER (Montreal) employs iodine sterilisation of the skin. It produces hyperæmia, and the hyperæmia is the real agent in producing asepsis. The increased supply of blood is not only in the skin itself, but also in the subcutaneous tissue. Balsam of Peru also gives rise to hyperæmia in wounds.

Mr. CUTHBERT S. WALLACE (London) pointed out that any method proposed must be judged by the results. In his practice the skin of the patient is well washed, the surgeon's hands are washed with soap and water, and then dry sterilised gloves are put on. The instruments are boiled and

put on a plain dry cloth, and if they are soiled during the operation they are dipped in sterilised water. As to the results he had obtained, in the last 600 "clean" cases he had only 4 per cent. in which any suppuration occurred.

Colonel HENRY SMITH, I.M.S., said that in the tropics it was necessary to have plenty of air, and therefore dust was very liable to be deposited on the wound and on the instruments. Therefore the instruments were kept in a solution of carbolic and the wound was flushed out at intervals with a solution of perchloride of mercury (1 in 2000). He uses no sponges and seldom drains the wound. Tetanus is one of the most serious complications of a wound, and it is specially liable to follow an operation for hernia. It may also follow an injection of quinine. The explanation is that whenever there is an anaerobic area tetanus bacilli from the blood will settle in it. The ligating of the stump of the sac produces an anaerobic area and the injection of the quinine has a similar effect. The solution of the difficulty is found in not tying but in suturing the sac of the hernia. It must be remembered that in India 50 per cent. of the men have tetanus bacilli in the blood. He uses catgut whenever he can. Want of dexterity has a very definite relation to sepsis, and he believes that all who aspire to success in surgery should have practice in hand work. He thought that not sufficient attention had been given to the after-effects of chloroform.

Mr. DOUGLAS DREW (London) said that as it was impossible to sterilise the skin, and as the skin was always septic at the end of an operation, it is necessary to protect the wound from the skin, and this can be done by clipping thick layers of gauze to the edges of the skin. In clean wounds he uses linen thread for sutures, but in septic wounds he uses catgut, though it is a little liable to give way. Drainage of a wound is unnecessary if the cavity in the wound can be completely obliterated.

Professor I. H. CAMERON (Toronto) declared himself an antiseptic surgeon. The use of iodine previous to operations is confined to emergency operations and to out-patient work. To prepare the skin of the patient it is merely washed with soap and water, while the instruments are sterilised in 1 in 20 carbolic and are then kept in 1 in 60. The dressing consists of gauze wrung out of a solution of carbolic acid in glycerine. As to the results in clean cases there is suppuration in less than 4 per cent. He rubs his hands with mustard and water and he has a high opinion of it. He employs ordinary marine sponges wrung out of 1 in 20 carbolic. He mentioned that he was the only surgeon who did not wear gloves at the hospital to which he was attached, and he claimed that his results were as good as the results of his colleagues. Dexterity in operating was merely a question of practice.

The PRESIDENT confessed that in most respects he followed the teaching of his teacher Lord Lister. He has used gloves for the last eight years, and the results were better than previously. He never uses a mask except when he suffers from nasal catarrh. In operations the surgeon has merely to follow out the precepts laid down by Lord Lister, "Be clean and be careful."

Radium in the Treatment of Malignant Disease.

Dr. RYERSON (Toronto) described two cases of malignant disease which had been treated successfully by Dr. Wickham of Paris. In the first case a tumour appeared in the toe, and after the toe was removed it returned in the foot. Half the foot was amputated and then it appeared in the glands of Scarpa's triangle. Radium was applied and the tumour rapidly disappeared, but it reappeared in the foot, but here also radium caused the tumour to disappear. In the second case a sarcoma appeared in the muscles of the thigh, and after removal it recurred, but the application of radium was soon followed by the disappearance of the tumour. He considered that radium should be used both before and after an operation.

ANATOMY AND PHYSIOLOGY.

THURSDAY, JULY 27TH.

President, Professor THOMAS H. BRYCE (Glasgow).

The PRESIDENT in his opening speech welcomed the visitors, and expressed his deep regret at the absence, through ill-health, of Professor Peter Thompson of Birmingham. He expressed his pleasure that anatomists and physiologists were sitting in joint session, for the modern specialisation of their subjects along somewhat divergent lines had led to serious inconveniences, and a meeting on common ground was necessary at times to bring the two branches of study into harmony. Nothing but good could come from such a union, and it was possible that with proper coöperation a great deal of simplification could be brought about, with a corresponding reduction of the detail of teaching and curtailment of the already overburdened curriculum. As an example of the changes that might be brought about by harmonious working with the physiologist, the President alluded to the study of histology. Physiology of to-day had so many ramifications that the teaching of histology by physiologists was something of a burden, and the growing importance of embryology and of microscopic detail to the anatomist made the teaching of histology almost imperative in his department. The study of microscopic and macroscopic anatomy should now go hand-in-hand, for no anatomist could be equipped properly for any research work unless he be both an anatomist and a histologist. Professor Bryce echoed the sentiments of modern anatomy when he noted that every year brought the work of the anatomist more within the domain of the physiologist, and expressed his conviction that it was by the combined attack of the sister sciences that the great outstanding problems of the human economy were to be solved. It was by such conjoined meetings as these that the truths of vital importance to medical science were to be solved.

Dr. ALEXANDER HAIG (London) then read a paper entitled

Some Factors of the Circulation, admitting of Easy Measurement.

The factors studied were the capillary reflux, the blood pressure, the relation of these two to each other, the cardiac area, and the liver dulness. Dr. Haig dwelt especially upon the capillary reflux as a valuable clinical sign, and he demonstrated his instrument for estimating and comparing it. He discussed the well-known physiological principles which underlay this very ancient method of investigation of the circulation, and he departed from the generally accepted teaching only in regarding the varying amount of uric acid in the blood as responsible for the variations of the reflux.

Professor E. M. WACE CARLIER (Birmingham) and Professor RICHARD ANDERSON (Galway) joined in the discussion which followed Dr. Haig's paper.

Mr. D. P. D. WILKIE (Edinburgh) delivered a paper on, and gave an excellent demonstration of,

The Existence of Valves in the Gastric Veins of Man,

and he extended the scope of his work so as to include other tributaries of the portal venous system. The author commented on the strange fact that although the presence of valves had been noted from time to time in the history of anatomy, still the text-books almost unanimously adhered to the statement that the portal tributaries were valveless. These valves may be demonstrated by the arrest of injections, as Hochstetter first showed, or by pressing their contained blood, as demonstrated by the present author. The valves are more conspicuous and more competent in young children than in adults, and Mr. Wilkie found them present in 38 out of 40 stillborn infants and in some 60 per cent. of 50 adults examined. They are most numerous at the site of the junction of the omental tributaries of the epiploic veins, but they were also demonstrated on other branches of the gastric veins and on the veins of the large intestine. So far the author had been unable to demonstrate them on any of the veins of the small intestine. In lower animals, such as the cat and the dog, these valves are also present. Some very beautiful micro-photographic slides were shown, in one case illustrating competent valves in a woman of 50. The valves appeared to be bicuspid and their structure very delicate.

The PRESIDENT, Mr. J. E. S. FRAZER (London), Professor CARLIER and Professor ANDERSON joined in the discussion.

Dr. A. MACLENNAN (Glasgow) delivered a paper dealing with

The Action of the Ilio-psoas Muscle.

He reviewed in detail the statements from various authors concerning the movements brought about by contraction of the muscle, the general consensus of opinion in text-books being that an abduction and an outward rotation of the femur were produced. From a series of observations on the action of the muscle in women who had recently been delivered, and on whom examination was easy, Dr. MacLennan concluded that

the muscle produced an inward and not an outward rotation of the femur. This conclusion was strengthened by an anatomical investigation into the relations of the muscle to the bone. The author's findings were that the muscle produced (1) abduction, (2) inward rotation, and (3) flexion of the femur on the pelvis.

A general agreement with the author was expressed in the discussion which followed, and Mr. FRAZER drew attention to the precise attachment of the muscle to the lesser trochanter of the femur.

Dr. S. LEWIS GRAHAM (Birmingham) showed a very remarkable Skeleton obtained from a dissecting-room subject at Birmingham University some four years ago. The skeleton was that of a male, the subject of achondroplasia, whose age was 46 years, and whose total height was 4 feet 6 inches. The outstanding characters of this skeleton were noted and demonstrated, and the pathology of the underlying process and its relation to other well-known bony anomalies were discussed.—Much interest was aroused by this very curious set of bones, and in the discussion which followed Dr. DOUGLAS E. DERRY (London) mentioned a case which had recently come under his notice from an ancient Egyptian graveyard.—Dr. GRAHAM, in reply, instanced the wonderfully accurate representations which the Egyptians had left us of what were without doubt examples of achondroplastic dwarfs.

Professor ANDERSON read a paper entitled

On Variation with Special Reference to Muscle.

The author dealt with such subjects as the regenerated limbs of arthropods, and the adaptation of the individual bones in the carpus and tarsus of the elephant. The underlying laws of variation were considered, and a review was made of the various theories put forward. The variations of the human carpus and tarsus were considered, such outstanding anomalies as the os trigonum being discussed. The paper was an abstruse one, not admitting of brief summary, and it was not followed by any discussion.

Demonstration on Reconstruction Models of Ferret's Brain and Pharynx.

Miss RADFORD (Birmingham) exhibited her reconstructed models of the Brain and Pharynx of a Ferret Embryo. The embryo used for this study was 6 millimetres in total length and of a probable age of 19 days. Some 400 sections were made of the head region, and these were reconstructed with a magnification of 100. Three models were shown—one of the head, one of the brain, and one of the side of the neck and the pharynx. A demonstration of the leading points of these models was given, and many of the features displayed were of great embryological interest. Miss Radford received the congratulations of the meeting on her models, but no detailed discussion of the many points of interest raised by them was possible within the time limits of the session.

Dr. J. P. GOOD (Birmingham) showed two reconstructed models of the Head End of a Ferret Embryo of 8 millimetres. This embryo, which was one of the series got together by Professor Arthur Robinson, showed the presence of spina bifida, and the reconstructions were therefore of obvious interest in connexion with a very early stage in the development of this anomaly. Some 360 sections were cut, and two models were reconstructed with a magnification of 50. The more important normal anatomical features of these models were demonstrated, and special attention was called to the sites of the cranial flexures. It appeared that the development of the spina bifida had taken place at the site of an abnormal flexure, and Dr. Good suggested that the flexure was the cause of the development of the spina bifida, but what accounted for the production of this abnormal flexure he was unable to say.

In the discussion which followed, the PRESIDENT alluded to the interest of the association of an abnormal flexure with the production of a spina bifida, and he instanced those cases where an abnormal retroflexion of the embryo in the sacral region is associated with sacral spina bifida.

Mr. FRAZER and Professor ANDERSON also joined in the discussion.

Professor CARLIER read a paper entitled

Notes on Some Effects of Iso-osmotic Solutions of Certain Salts on Frog's Muscle.

The first part of the paper was concerned with the method of experiment and the description of the apparatus devised for studying the behaviour of frogs' muscles when immersed in iso-osmotic solutions of salts. The muscle under investigation was first stimulated in its undrugged condition and a record was taken of its contraction; 20 c.c. of the iso-osmotic solution was then poured into the specially constructed vessel in which the preparation was suspended, and fresh records were taken of its contraction on stimulation. Single break shocks were used in all cases for stimulation, and time records of the immersion were made. Some very beautiful tracings were handed to the meeting illustrating the effects produced, and elaborate tables were constructed to show the behaviour of the solutions employed. All solutions were found to produce some well-marked effect on the muscle, some solutions causing it to shorten markedly and some producing elongation. It was found that the sodium halogens of Group VII. followed the periodic law in all effects, their action becoming more marked with the increasing atomic weight; that the chlorides of Groups I. and II. did not follow the periodic law, or followed it in some effects only.

In the discussion which followed Dr. D. FRASER HARRIS (Birmingham) alluded to the importance of the method as a means of studying the effects of various solutions upon tissues.

Method of Strengthening Wax Plates.—Reconstructed Model of Ferret Embryo.

Dr. THOMAS YEATES (Birmingham) gave two demonstrations, of which the first was directed to call attention to some improvements in the method of strengthening the wax plates used for reconstruction models. Dr. Yeates showed specimens of all the plates used at the present day, as well as of the special type of plate with which he had been working recently. He criticised the various methods which had been employed to strengthen the wax plate, and enumerated the substances which had been used, and with which he had experimented. After trial of many substances Dr. Yeates had obtained the best results from the incorporation of thin sheets of celluloid within the plate. Such plates can be readily handled and possess the advantage that they may be bent without cracking. The samples handed to the meeting met with general approval. Dr. Yeates's second demonstration was on a series of reconstruction models of a ferret embryo of a maximum possible age of 15 days. The embryo was cut in utero, and it showed a remarkable number of points of interest and novelty in connexion with the early stages of the union of the embryo and the uterine wall.—The amount of detail demonstrated by Dr. Yeates baffled any minute discussion, but the PRESIDENT and Mr. FRAZER raised some additional points of interest which the models made clear.

DISEASES OF CHILDREN.

THURSDAY, JULY 27TH.

President, Dr. OTTO J. KAUFFMANN (Birmingham).

Dr. SAMUEL WEST (London) opened a discussion on

The Diagnosis and Treatment of Chronic Pulmonary Affections of Children.

He said that tuberculous pulmonary affections in children were for the most part acute, appearing as acute miliary tuberculosis and acute caseating pneumonia. The chronic lesions indicated by the term phthisis were very rare before the age of five years, and the same remark applied to hæmoptysis. Chronic tuberculous pleurisy was rare compared with the frequency of chronic tuberculous peritonitis, which was remarkable considering the close connexion between the two serous membranes and the very thin partition between them. Tuberculous enlargement of the bronchial and mediastinal glands was a condition of great interest and importance, though they rarely led to pulmonary lesions, unless they perforated a bronchus and set up acute aspiration broncho-pneumonia. In many cases wrongly diagnosed and treated as asthma the symptoms were in reality due to pressure on the trachea by these enlarged glands. Dr. West related an interesting case in illustration. There were several different kinds of emphysema common in childhood, including interstitial emphysema and the transitory over-distension of the lung which resulted from violent coughing, as in whooping-cough, and the collateral emphysema which developed round the patches of collapse in broncho-pneumonia, which often appeared and disappeared

in a remarkable way. True large-lunged emphysema as it occurred in the adult was rare in the child. Collapse of the lung was one of the most interesting conditions met with in childhood, as it was one of the commonest complications of bronchitis and broncho-pneumonia. It was largely due to feeble muscular power and to the want of rigidity of the chest walls. Bronchiectasis in the chronic form was associated with fibrosis of the lung. The peculiar condition described as "turtle lung" was often preceded by a febrile attack resembling pneumonia, to which it was referred, but intercurrent febrile attacks were common enough in bronchiectasis. The treatment of the chronic pulmonary affections of childhood must be on the same general lines as in the adult.

Dr. H. VOGT (Strasburg) said that it was a well-known clinical fact that certain cases of broncho-pneumonia, especially those due to measles and whooping-cough, had a special tendency to run a prolonged course, and that the symptoms were very liable to recur after the disease had apparently subsided. Each new attack brought with it danger, which was greater the oftener it was repeated. The position of predilection of the disease was the left lower lobe posteriorly and laterally. He believed that the pulmonary diseases caused by the influenza bacillus showed a more marked tendency to chronicity than any others.

Dr. J. E. H. SAWYER (Birmingham) laid stress upon the extreme rarity of chronic tuberculosis of the lungs in children, more especially on account of the misleading reports of school inspectors, in which this affection was diagnosed in from 3 to 60 per 1000 of all children treated. In his examination of 10,000 children he had only diagnosed phthisis of the adult type in 11 cases.

Dr. W. R. JORDAN (Birmingham) agreed with Dr. Sawyer's remarks, and drew attention to the importance of the pharynx and naso-pharynx in the production of the frequent coughs of childhood.

Dr. D. BARTY KING (London) thought that pulmonary tuberculosis occurred in from 3 to 5 per 1000 in London school children aged from 8 to 12, and that latent tuberculosis existed somewhere in many others.

Dr. N. C. HARING (Manchester) recommended swabbing of the larynx or trachea in these cases as a means of obtaining tubercle-laden mucus when cough and sputum were absent.

Professor STOELTZNER (Halle) advocated the use of fibrolysin in the chronic fibrotic pulmonary diseases of children.

Dr. D. STANLEY (Birmingham) considered that a number of the cases of so-called "chronic bronchitis" in children were due to a chronic adenoid hypertrophy, not in the pharynx so much as in the larynx and bronchi. These, he believed, were the patients so often wrongly diagnosed as tuberculous.

Dr. C. P. LAPAGE (Manchester) considered that phthisis was not very rare in children, especially in older children. Probably the bronchial glands were often the seat of primary infection, and the disease spread from them to the lungs.

Dr. ELIZABETH J. MOFFETT (Stafford) said that in examining school children some 15 to 20 per cent. were found with impaired notes on percussion either at the apices or bases, or both. She believed that many of these children developed phthisis later, but many cases cleared up when adenoids were removed.

Dr. W. EWART (London) agreed with Dr. Moffett's conclusion that local impairment of the percussion note was not always due to tuberculosis, but was in children frequently the late result of rickets, which caused imperfect expansion of parts of the thorax. In the treatment of bronchiectasis he recommended the systematic use of the "infant exerciser" which he had devised, which acted by emptying the sacculations and expanding the lung.

Dr. A. E. NAISH (Sheffield) agreed that chronic tuberculosis in children of school age was uncommon, though enlarged mediastinal glands were fairly frequent.

Dr. E. C. MYOTT (Newcastle) held that the majority of children who suffered from chronic cough without physical signs were mouth-breathers.

Dr. WEST replied to the remarks of the various speakers.

Dr. VOGT read a paper on

Disturbances Arising from Milk Feeding in Children after the First Year.

He thought it was not generally known that overfeeding with milk might be injurious to infants, even though the milk was uncontaminated by micro-organisms and irreproachable in quality. There was a definite group of children who were specially liable to disease from overfeeding with milk—namely, those who suffered from the constitutional abnormality described by Professor Czerny under the name of "exudative diathesis." This continued for some time even during later childhood. In this condition there was a pronounced susceptibility of the skin and mucous membranes of the body, resulting in different forms of eczema, as well as catarrhal affections of the respiratory and digestive organs. In these cases milk diet should be greatly restricted, and during the second year small quantities of finely minced meat should be given instead of milk. It was generally supposed that breast-fed infants were protected against rickets, but in his opinion this was a mistake, as children who inherited a disposition to rickets might suffer severely even though fed on breast milk. He also believed that children who had excessive milk feeding were more susceptible to infection than normal children. A third group of diseases directly affected by milk diet was the group of anæmias. Children fed on an exclusively milk diet up to the end of the first year, and even during the second year or longer, almost invariably showed a pronounced pallor. There was a diminution of red corpuscles and of hæmoglobin, but usually no increase of white cells. In these cases it was necessary to diminish the amount of milk and replace it by vegetable food and meat. Constipation also was caused by an excessive milk diet. In conclusion, Dr. Vogt maintained that the long retained dogmatical belief of the medical profession that milk was not only the ideal food for infants, but for every age and every ailment must be abandoned.

Dr. EWART referred to the value of whey as a temporary measure of dieting in infantile milk dyspepsia.

Dr. STOELTZNER quite agreed with Dr. Vogt about the clinical facts and the treatment in these cases.

Dr. R. B. MCVITTIE (Dublin) agreed as to the dangers of excessive quantities of milk, but thought that much of the evils were due to chemical and physiological changes produced by excessive heat in pasteurisation.

Dr. VOGT, in reply, said that he had found no difference between sterilised and unsterilised milk in the feeding of infants and children.

Mr. D. C. L. FITZWILLIAMS (London) read a paper on

Nervous Influence in the Causation of Angeiomata,

based upon notes of 700 cases which he had himself observed. His conclusions from his investigations were: (1) that females were affected more frequently than males; (2) that nævi were almost always present at birth and only comparatively few appeared at a later date, spider marks and deeply seated nævi being the chief exceptions to this rule; (3) that nævi most usually started on the surface and less frequently in the deeper structures; and (4) that their extension and growth were intimately connected with the nerve-supply of the part affected.

ELECTROTHERAPEUTICS AND RADIOLOGY.

THURSDAY, JULY 27TH.

President, Dr. HUGH WALSHAM (London).

The proceedings opened with a paper by Sir VICTOR HORSLEY (London) and Dr. N. S. FINZI (London) on

The Action of Filtered Radium Rays Applied Directly to the Brain,

which was read by Dr. Finzi. The following is an abstract. In the literature on the action of radium rays on the brain Danysz's was the first communication and Obersteiner's and Alquier and Faure-Beaulieu's the most important work. Except for an experiment of Danysz, in which the tube was laid outside the bony canal of the spinal column, these all used external applications, most used toxic doses, and Alquier and Faure-Beaulieu, the only ones who used filters, only employed 1/10th and 2/10th mm. of lead. In the present experiments a platinum tube ½ mm. thick containing radium carbonate, having, according to Rutherford's standard, a content of 27·7 mg. of metallic radium, was used, and was by means of a trephining operation laid directly on the pia mater over the pre- and post-central gyri of three monkeys. In the third monkey a tube containing nearly double the amount of radium was placed on the opposite side, and at a subsequent experiment on the occipital lobe. The time the tubes were left on varied from

2½ to 4 hours, and the animals were killed at periods of 16, 26, 31, and 45 days after the experiments. In none of the animals was the slightest symptom exhibited even where large overdoses had been given. Histologically it was found that the meninges were infiltrated with blood, and that their vessels showed considerable proliferation of the endothelium which sometimes practically occluded the lumen. There was also a considerable formation of fibrous tissue which extended into the cortex and along the sulci. Small hæmorrhages were seen mostly in the first two layers, but in one animal extending as deeply as the fifth layer of the cortex, and it is noted that they are due to erythrocytes which have passed into the perivascular lymphatics and sometimes breaking through these into the surrounding neuroglia. There also occurred in the animal killed on the twenty-sixth day small collections of leucocytes at rare intervals in the first two layers of the cortex. Further, there occurred wedge-shaped thrombotic areas about a quarter of its depth in the cortex. The only change discovered in the nerve cells apart from these thrombotic areas was a condition of hyperchromatosis in the cells of the region of the cortex in which the hæmorrhages occurred. Examined by the Marchi method, there was some degeneration of the pyramidal fibres as well as some fibres in the brain proceeding from the hæmorrhagic areas.

Professor FARR (New Zealand) gave the results of some observations made on the effect of radio-active water on the development of fish. A large amount of the water used in New Zealand came from artesian wells, and it was observed in the hatcheries that ova placed close to the opening of one of the wells, particularly if the water was not agitated in any way, very soon died; but if placed a little distance from the well, and especially if the water flowed over a weir or was otherwise agitated, very few of them died; while among the survivors two conditions were recognised, the most frequent being protruding eyeballs—"pop-eye"—and the other being the development of a blue sac attached to the gill. These conditions tended to disappear when the fish were removed a considerable distance from the well. Examination of the water taken carefully from the mouth of the wells showed that the water was radio-active and that a gas closely resembling the emanation of radium could be collected from it. Professor Farr stated these facts as a contribution to the physical and biological aspects of radium; he was not in any way concerned with the medical applications of that substance.

Dr. F. HERNAMAN-JOHNSON (Bishop Auckland) and Mr. W. DEANE BUTCHER (Ealing) also made some remarks bearing on the subject.

In opening a discussion on

The Therapeutic Uses of Radium,

Mr. DEANE BUTCHER said that the time had come when it was possible to make a sane and sober judgment as to the utility of radium, and the cases which were amenable to radio-action treatment. The cases specially suitable were small circumscribed lesions of the skin. He protested against the practice of excising a portion of a doubtful growth for diagnostic purposes, since this defeated the very object of radium treatment—viz., the destruction of the neoplasm without opening the lymph channels. In extensive or deep-seated cancer the most hopeful procedure was to introduce the radium into the interior of the growth by a surgical operation or to introduce the radium ion itself by Hasel's electrolytic method. Mr. Deane Butcher alluded to the theory of immunisation by radio-vaccination as a possible explanation of the good effects of radium irradiation. With regard to measurement, he considered that the dose should be defined accurately by the weight of pure metallic radium contained in the specimen used. The prescription for radium irradiation should include weight of metallic radium, area of applicator, thickness of screen, and duration of irradiation. He alluded to the approaching opening of the Radium Institute, which would afford to poor and rich alike in this country an adequate supply of radium. He hoped that the new radio-active substance, meso-thorium, would perhaps partially replace radium, and at all events help to mitigate the present radium famine.

Dr. J. H. SEQUEIRA (London) gave a short account of his experience of the use of radium at the London Hospital and in his private practice. He had treated nearly 400 cases, and emphasised the fact that in the majority of early cases of rodent ulcer the results were admirable. The factors which militated against success were the involvement of cartilage and bone and the spread of the disease into the orbital cavity. He was accustomed to apply the radium in the form of sulphate spread upon metallic plates.

Dr. FINZI spoke of the great value of proper filtration in radiumtherapy, which had to be modified both as to material and thickness depending on the requirements of the case and other circumstances. He also referred to the pronounced action of the beta rays of radium in the production of fibrous tissue.

Mr. W. HOLDER (Hull) spoke of the good results obtained by the use of small quantities of radium in cases of malignant disease as well as other local conditions. He emphasised the danger of making the intervals between applications too short.

Dr. G. WILLIAM HILL (London) referred to the results obtained in œsophageal strictures, which were very encouraging up to the present. He also asked for some standardisation of dosage.

Mr. COLIN CAMPBELL (Southport) also bore testimony to the good results that were to be obtained from the use of small quantities of radium, and he quoted instances of its great value in tuberculous ulcerations, and particularly in pruritus.

The prominent feature of this discussion was the evidence brought forth as to the large amount of good work that could be done with small quantities of radium, even though it be not of the highest possible activity.

Professor J. K. A. WERTHEIM SALOMONSON (Amsterdam) described and showed

A Modified Form of Benoist's Penetrometer

for measuring the hardness of the X ray tube. It might perhaps be more accurately described as a modification of Wehnelt's, which it more closely resembles. The improvement consists in the provision of two wedge-shaped pieces of aluminium, inverted to each other, so that as one is moved over the other the whole of the aluminium within the field of vision is of even thickness for all degrees of penetration. The instrument is being made in this country by Messrs. Newton and Co.

Dr. REGINALD MORTON (London) read a paper to introduce a discussion on

The Present Position of the X Ray Treatment of Malignant Disease.

He considered that the present time was a very good one to take stock of our position in this respect, but in connexion therewith he felt there were several points that wanted clearing up, and upon these he particularly invited discussion. Assuming that our object is to destroy or otherwise remove the cancerous cells, how far beneath the surface is the X ray method capable of bringing this about? Owing to the fact that the therapeutic value of the rays fell off very rapidly as the penetration increased and from observation in other ways, he was of the opinion that this could not take place to any appreciable extent beyond one-half inch from the surface of the growth. He considered that it was only those rays which were stopped and absorbed by the tissues that produced any effect upon them. He regarded the introduction of filters as one of the most important events in the history of radiology. He considered the non-metallic filters the most useful for this particular class of work. In the matter of dosage he had tried different methods, but now favoured fairly liberal doses given at comparatively short intervals. Massive doses at intervals of a week or so had given very poor results. He also invited an expression of opinion as to the relative value of the method in sarcoma and in carcinoma. In his own experience cases of carcinoma had so largely predominated that he found it difficult to draw a comparison. It was impossible to say how any particular case would respond to X ray treatment, but cases of carcinoma did so more evenly than sarcoma and also more favourably, though among the latter class he had one of his most brilliant results. It was, however, always possible to tell after a few applications how the case was likely to respond to the method, and for this reason he considered a trial course of treatment advisable in all cases. Summing up, he stated that the influence of the method upon malignant disease was a most distinctly favourable one—pain was relieved, the rate of advance was

greatly reduced and even arrested for a time, ulceration and accompanying discharge were checked, life was prolonged, and the patient made more comfortable in nearly every way. Unfortunately, treatment by any form of radiation gave us no control over metastasis. If we were to make any decided progress we must meet this difficulty to some extent at least. With this in view he made a plea for a closer coöperation between the surgeon and the radiologist than had existed up to the present. Taking operable cases first, he advised that a massive dose of X rays should be given to the site of operation before the wound was closed—a perfectly feasible procedure—and further X ray treatment as soon as the patient could bear it, carried on at intervals for a year or more. With regard to cases usually declared to be inoperable, the surgeon should not wash his hands of the case, as is so frequently done, but should consider whether it is not possible to remove the more superficial parts so as to allow the rays to get more or less directly at the part that really matters—the advancing margin.

In the discussion that followed most of the speakers were in agreement with the main points raised in the paper.

Dr. FINZI was not so sure that radiations which were unabsorbed did not produce some effect on the cells by the mere act of passing through.

Professor WERTHEIM SALOMONSON considered that the results of the X ray treatment of malignant disease were not encouraging as a whole, but admitted that the more superficial cases at times did very well.

Mr. J. HALL-EDWARDS (Birmingham) considered that only in the most severe cases should massive doses be given, but in ordinary conditions he thought mild doses repeated daily or on alternate days gave superior results.

Dr. J. DELPRATT HARRIS (Exeter) related his experience with a case of sarcoma of the cheek which seemed to resist ordinary treatment and he decided to give a very massive dose. He administered the equivalent of 18 Sabouraud pastille doses, the sitting lasting nearly six hours. An aluminium screen, ½ mm. thick, was placed between the skin and the tube. The tumour rapidly shrank and gave every promise of doing well. No bad results were noticed from the massive dose.

Dr. W. IRONSIDE BRUCE (London) also gave his experiences with very massive doses of the X rays, and felt that the method gave promise of good results in this class of disease.

Dr. MORTON suitably replied.

Dr. IRONSIDE BRUCE read a paper on

Pyelography and the Use of Collargol in the Diagnosis of Diseases of the Urinary Tract.

He said that collargol forms a perfectly inert solution which is opaque to the X rays. In cases of suspected dilatation, for instance, of any part of the system this part is filled with the collargol solution and the part radiographed. The work had been done in conjunction with Mr. J. W. Thomson Walker, whose paper was published in THE LANCET of June 17th, 1911.

At the afternoon session Mr. W. ARMSTRONG (Buxton) reported the results of his treatment of over 600 cases by

Radium Water

by means of drinking, inhalation, and bathing; the two latter in conjunction with oxygen. He showed that the radium emanations were eliminated in order of quantity by the lungs, skin, and kidneys. He described the increased excretion and the greater amount of the body poisons carried off in the breath, perspiration, and urine; also the increased activity of the various digestive ferments, and the hastening of purin body metabolism, and of the excretion of uric acid. He gave examples of most satisfactory results in cases of gout, rheumatism, arthritis, neuritis, diabetes, Bright's disease, high blood pressure, and neurasthenia. Great stress was laid upon the value of the radium oxygen both in high arterial tension, insomnia, and skin trouble of nervous origin. Mr. Armstrong summed up as follows: (*a*) That the successful treatment of diseases by radium water demanded a high dosage; (*b*) that these large doses can be given without the least fear of ill-effect; and (*c*) that two points stood out as regards the value of this treatment: (1) the great increase in nerve strength and vitality; (2) the very considerable quantity of poisonous matter expelled from the body.

A Review of Radium Therapy.

Professor S. SAUBERMANN (Berlin) gave the section a fairly complete review of all the work which forms the basis of to-day's radiumtherapy for internal use, and went into some detail regarding the physical, chemical, biological, and physiological properties of the emanation. His purpose was to prove that there really exists a close connexion between the emanation and certain processes which take place within the human organism. A large number of tables and experiments which he mentioned suggested that a quantity of energy is developed by the atomic disintegration of radium into a series of decomposition products, and though the emanation itself is absolutely inert, its mere presence brings about chemical reactions which are otherwise inconceivable, or which would normally be greatly accelerated. From this is derived the conclusion that biological and physiological influences upon living cells and organisms must take place. Professor Saubermann stated the following as "biological facts with regard to radium emanation," giving the date of the research and the name of the observer:—

1903—The preparation of radio-active water by means of radium for biological research. (Saubermann.)
1904—Radium emanation (R.E.) increases autolytic fermentation. (Neuberg.)
1905—R.E. increases the activity of the peptic ferment. (Bergell and Bickell.)
R.E. increases the activity of the pancreatic ferment. (Braunstein and Bickell.)
1906—R.E. increases the activity of lactic acid fermentation. (Richet.)
1907—R.E. increases the peristaltic actions. (Deutelmoser and Saubermann.)
1908—R.E. increases the solubility of uric acid salts (urolytic fermentation). (Deutelmoser and Saubermann.)
R.E. increases the glycolytic fermentation. (Deutelmoser and Saubermann.)
1909—R.E. increases the activity of diastatic fermentation. (Edelstein.)
1910—R.E. penetrates the skin into the body. (Engelmann and Strassburg r.)
1911—R.E. effects leukopenia. (Noorden and Falta.)
R.E. increases the coagulability of the blood. (Lazarus, Saubermann, and Velden.)
R.E. penetrates every animal membrane and tissue.
R.E. acts by its disintegration products.
The co efficient of solubility in blood is 0·20. (Lazarus and Saubermann.)
The greater radio-active quality of mountain air plays an important part in human life. (Aschkinass and Kaspari.)
The radio-activity of the air is a matter of importance to the human organism. (Saake.)
In southerly winds (Sirocco, Samun), the physiological action of which is well marked, the radio-active capacity is exceptionally high. (Gockel, Aschkinass, and Kaspari.)
All increased radio-activity in mineral springs makes itself felt in the human organism, a physiological factor which cannot be ignored. (Bergell, Bickel, and Himstedt.)
The higher the emanation capacity of a given spring, the more striking are the physiological results. (Mache, Curie, and Laborde.)
Water rendered radio-active has a most unusual influence upon the human organism. (Bergell, Bickell, and Deutmann.)
Owing to inhalation of emanation in the galleries of the St. Joachimsthal pitchblende mines, where the air is radio-active, gout, rheumatism, and neuralgia do not occur. (Gottlieb, Kemen, and Deutwitz.)
Occurrence of bladder activity, increased diuresis, and exacerbation of pains in baths with radio-active water. (Neusser, Saake, and Wilke.)
R.E. has a favourable effect upon organic metabolism. (Deutelmoser, Saubermann, Silbergleit, and Kijokkl.)
Importance of radium emanation in disturbed organic metabolism. (Krieg.)
Increase in the excretion of urea up to 34 per cent. and of uric acid up to 14 per cent. (Wilke.)
The cardiac blood pressure, diuresis, excretion of urea and uric acid are influenced. (Deutelmoser, Saubermann, and Krieg.)
R.E. lessens blood pressure and cardiac activity. (Deutelmoser and Saubermann.)
A certain percentage of radio-active electric ions in the air is absolutely necessary, especially for gouty and rheumatic patients. (Steffens and Grabley.)
R.E. has the power of keeping the uric acid compounds in their easily soluble forms. (Deutelmoser and Saubermann.)
R.E. acts both as a powerful nerve sedative and as a hypnotic. (Pollack and Dreuw.)

"If emanation will activate ferments, a very broad basis for a scientific therapy has been established," said Professor Saubermann, who considered that a normal secretion and mutual activation of ferments are indispensable to the synthesis of simple, classical compounds derived from nourishment. His clinical results so far obtained cover, he said, "as they logically should, the vast field of body metabolism, and have proved of great benefit in the treatment of gout, rheumatism, diabetes, nephritis, high blood tension, and other complaints of similar character, as shown by numerous leading authorities, such as Bergell, Lazarus, Schiff, Bickel, Peters, Sandmayer."

LARYNGOLOGY, OTOLOGY, AND RHINOLOGY.

THURSDAY, JULY 27TH.

President, Mr. FRANK MARSH (Birmingham).

Mr. MACLEOD P. YEARSLEY (London) and Dr. HUGO FREY (Vienna) opened a discussion on

The Treatment of Chronic Adhesive Processes in the Middle Ear.

Mr. MACLEOD YEARSLEY said the magnitude of the subject necessitated limiting the conditions to be discussed to post-suppurative and post-catarrhal processes, to the exclusion of the labyrinthine capsule. Accuracy of diagnosis was important, and was dependent upon the careful consideration of three factors—namely, symptoms, results of physical examination, and evidences afforded by careful functional testing. Regular inflation of the ear was of value, and inflation from a catheter was to be preferred before that from an indiarubber bag on the grounds of cleanliness and also because the former method could be better controlled by the operator. The Valsalva method was to be deprecated. Nasal treatment was to be encouraged, especially with regard to abnormal conditions in the fossæ of Rosenmüller. Prophylaxis, he considered, would be the treatment of the future. Attention should also be paid to conditions outside the ear, such as pyorrhœa, intestinal toxæmia, and gouty tendencies. The use of thyroid extract in his experience had been attended with uniform failure, and the use of thiosinamin, or its derivative, fibrolysin, had been disappointing. Oto-massage was of value; he was in favour of short piston strokes and rapid vibrations. The operative methods of treatment included mobilisation of the malleus, incision of the posterior fold of the tympanic membrane, tenotomy of the tensor tympani and the stapedius muscles, exploratory tympanotomy, the division of adhesions, the removal of portion of the membrana tympani, and ossiculectomy. Some of these were useful. The value of ossiculectomy was doubtful; possibly the operation was unjustifiable. Whatever method of treatment, whether non-operative or operative, might be employed, a considerable number of cases remained unrelieved. For these, two courses were open—lip-reading, or the use of an artificial aid to hearing. As regards the latter, there was room for valuable research. There was much to be done in the investigation of the relative uses of electrical aid, such as the combination of telephone and microphone; but such investigation required the coöperation of the expert electrician and the otologist.

Dr. FREY spoke of the difficulties that had arisen from the loose terminology in present use. In a subject such as that they were dependent upon the experiences gained by others and the records of those experiences, hence the difficulty in classification and the confusions that had arisen. Such terms as chronic catarrh, dry catarrh, and chronic adhesive processes of the middle ear had been loosely used and interchanged. He pleaded for the distinction of oto-sclerosis from chronic adhesive processes and for more exact reports and better diagnosis by contributors to the literature. Dr. Frey gave a brief account of the etiology of the disease and discussed and compared the various methods of treatment under the following headings: prophylactic measures, local (mechanical and electrical) treatment, constitutional treatment, and operative measures. He urged the importance of inflation of the ear, inasmuch as even minute changes in the Eustachian tube could materially affect the hearing. He did not commend the injection of fluids into the Eustachian tube. A new method of treatment which he thought might ultimately be found to be of service in reducing the subjective noises was the use of light rays. Mobilisation of the stapes, he considered, was both dangerous and useless.

Dr. ANDREW WYLIE (London) referred to the hot-air method of treatment and exhibited an apparatus, which he had shown previously to the section when the Association met in Belfast, for producing hot air by means of the electric current. Since previously exhibiting the apparatus it had been simplified and reduced in bulk. The difficulty of controlling the heat occasioned by the hot air passing through a metal Eustachian catheter had been overcome by using a catheter made of vegetable matter.

Dr. W. JOBSON HORNE (London) pointed out that even in the worst of the cases of deafness under discussion there was a residuum of hearing, and it was important to encourage the patient to cultivate that residual hearing. Therefore one was justified in urging a course of treatment even in those which appeared to be the most hopeless cases. One indication for the treatment of nasal obstruction or narrowing was marked relief following the use of the nasal catheter; but should the use of the nasal catheter yield a negative result that was not, in his experience, evidence of nasal treatment being contra-indicated. Prophylaxis and special attention to the naso-pharynx in early life were strongly indicated. It was remarkable, in his experience, how the sudden onset of suppuration in the middle ear in a long-standing case of chronic dry non-suppurative catarrh would at times leave the patient with a marked improvement in the hearing. He considered that the multiplicity of remedies was in itself a blot upon their methods of treatment of that particular form of ear disease. He thought the time had come for more attention to be paid by themselves in coöperation with expert electricians to the manufacture and sale at reasonable prices of instruments to aid the hearing.

Dr. P. WATSON-WILLIAMS (Bristol) said that even modified success was of importance in the cases under discussion. Adenectomy must be undertaken not only for the relief of nasal obstruction, but also in cases without the adenoid facies for the relief of nasal and Eustachian catarrh. As regards the advisability of removing the drum and the malleus, if a perforation of the drum improved the hearing then he thought one would be encouraged in the operation.

Mr. H. F. MOLE (Bristol) spoke of his experience with fibrolysin, and was desirous of hearing which cases were to be selected for the mobilisation of an adherent malleus.

Mr. W. S. SYME (Glasgow) spoke in favour of extending nasal operative treatment, especially where a naso-pharnygitis existed. In all cases the condition of the internal ear must be previously taken into account. As regards fibrolysin, in cases of pure adhesive middle-ear catarrh he had met with no improvement, but in cases of post-suppurative conditions remarkable results had been obtained. In reading the reports upon school children he had been struck by the proportion of cases in which the diagnosis of enlarged tonsils had been made without any mention of adenoids. The natural inference was that the tonsils had been removed by the practitioners, and the more important factor, the adenoids, had not been removed. From the point of view of prophylaxis that was to be regretted.

Dr. L. H. PEGLER (London) supported the theory of a nerve influence helping in the operative nasal treatment of cases of deafness.

Dr. A. BRONNER (Bradford) argued that by preventing catarrh one would help in preventing the resulting contraction of tissues. The majority of people in this country had nasal catarrh once or twice or more often in the year. This he attributed to the sudden onset of fog and damp in the course of the night whilst sleeping with an open window, and he advised a return to the old-fashioned nightcap as a preventive. All elderly people who are deaf, he considered, should take iodide of potassium in small doses not for weeks or months but longer.

Dr. DAN MCKENZIE (London) pointed out that there were other means of making the tissues hyperæmic besides the hot-air treatment, such as Bier's method or the application of irritants to the drum. He suggested a wider rubber tube in Dr. Wylie's apparatus.

Mr. F. W. SYDENHAM (Walsall) recorded his experiences with the use of fibrolysin. He had observed improvement in 3 out of 12 cases in which he had used it. In one case suppuration inadvertently supervened and with great benefit to the patient's hearing power.

Mr. H. TILLEY (London) said that fibrolysin in his hands had been of no use whatever. The Eustachian catheter he regarded as a test or indication for nasal operative measures. If no improvement in hearing resulted from the use of the catheter, then he considered no benefit would be afforded to the hearing by nasal operation.

Dr. J. GIBB WISHART (Toronto) considered that even if the use of the catheter gave a negative result as regards the hearing, one would not be justified in sending away the patient without treatment if nasal catarrh or post-nasal catarrh existed.

Dr. H. J. DAVIS (London) supported nasal douching. He was in favour of Eustachian injections and the administration of iodide of potassium.

Mr. YEARSLEY and Dr. FREY replied.

The PRESIDENT summed up the discussion. From the opinions that had been expressed he gathered that the general view of the meeting was that if temporary improvement to the hearing could be obtained by inflating the middle ear then nasal treatment should be adopted, and even if not much improvement followed inflation, then nasal obstruction should be dealt with. The residuum of hearing should be cultivated, and, if possible, improved, and the patients encouraged to keep up their general health. Operative measures upon the ear itself appeared to stand very much where they were before.

Dr. JOBSON HORNE exhibited

A Simplified Insufflator for Use in the Treatment of Diseases of the Throat, Nose, and Ear.

The instrument consists of glass-tubes of various lengths, shapes, curves, and calibre to meet the requirements of the regions in which they were to be used. The distal end of the tubes is roughened on the inner surface for an inch or more. This roughening of the inner surface of the tube permits of the powder being retained *in situ*, and also of a known quantity of powder being used. The advantages claimed for this insufflator are: simplicity, cleanliness, simplicity of auto-insufflation, precise dosage, and cheapness. The instrument has been made by Mr. F. Rogers of Oxford-street.

MEDICAL SOCIOLOGY.

THURSDAY, JULY 27TH.

President, Dr. GEORGE REID (Stafford).

Hospital Reform in Relation to the National Insurance Bill

was the subject upon which distinguished speakers, medical and lay, addressed the Section at its second session. The question was dealt with both from the points of view of the medical staffs and of the governing bodies of hospitals, and there was evidently some difference of opinion as to whether hospitals will be wise in accepting grants-in-aid from the State in respect of insurance patients. Dr. GEORGE REID again presided, but the attendance was still disappointing—it was suggested because the Section had been "skied." The meeting-place was on one of the topmost floors of the University buildings.

Dr. LAURISTON E. SHAW (London), in a brief opening paper, asserted that the Insurance Bill must profoundly alter the position of the hospitals. Even if the Bill did not pass, the prominence given by its discussion to the unsatisfactory provision of medical treatment for large sections of the community must lead shortly to the institution of some alternative to the present chaotic jumble of indiscriminate charity, inadequately paid contract service, and a mutually unpopular Poor-law medical service. Assuming that the Bill would pass—modified, of course, in accordance with the strictly moderate demands of the medical profession—the hospitals would find there was still much work for them to do on a voluntary basis. The Bill provided only, except in the case of consumption, for ordinary domiciliary medical treatment. For other cases further provision of some sort must be forthcoming, and it seemed probable that, at any rate at the outset, it would be made by means of the voluntary hospitals. It had long been recognised that the attempt to combine the dual function of ministering to minor ailments, and at the same time dealing with cases requiring the highest resources of medical and surgical skill, had handicapped the development of the professional side of the hospital, while the avoidance of imposition and abuse in these conditions had become quite impossible. The provision of insurance for ordinary treatment for a large section of the present hospital *clientèle* should greatly simplify the selection of suitable cases. Inquiries into the economic position of the patient would be reduced in many cases to determining the status of the patient under the insurance scheme, and there would be *primâ facie* ground for insisting that the hospital should exercise its proper function of providing special medical service only. Dr. Shaw laid stress on the necessity from both professional and social points of view of dealing with the insured persons at the hospital on a consultative basis in coöperation with the insurance doctor. From the professional point of view it might well be regarded as a breach of medical etiquette for a member of the hospital staff, knowing that the insured person had definitely engaged a medical practitioner to attend him, to undertake his treatment except with the sanction of, and in coöperation with, that attendant. To deal entirely on independent lines with another man's patient, even in the sacred name of charity, could hardly be tolerated in the altered circumstances created by the Bill. From the social side the public, which had to maintain the insurance fund, was equally interested with the profession in securing coöperation between the insurance and hospital doctor. It would be obviously unfair and detrimental to the insurance service (Dr. Shaw went on) that the hospital should be in direct competition with it. The fact that hospital treatment was given by men who were consultants and usually charged private patients higher fees than the insurance doctor did, the glamour of the place, and the ritual observed in teaching students would, even if the actual service were inferior—instead of being as a rule, for suitable cases, superior—strongly impress the patient with its superiority. To avoid disaster systematic coöperation was essential. On the question of the nationalisation of hospitals Dr. Shaw said that while believing that in the interests of medical research and education the voluntary system should be maintained, he recognised that its continuance was imperilled. The transformation of voluntary hospitals into truly consultative institutions, taking no independent part in the treatment or investigation of disease, but coöperating always with institutions or private practitioners undertaking ordinary medical treatment, would provide them with a new lease of useful life, and would probably postpone indefinitely the nationalisation or municipalisation of that higher class of institution which was capable of adopting that line of professional work. Even if the hospitals did become nationalised, it would still be essential to define their relation to the insurance service. For the State to provide side by side an institutional and a domiciliary service, and to allow the patient to chose which he would use, would be a most unreasonable and unbusinesslike proceeding. Unless the voluntary hospitals would relinquish voluntarily all treatment such as was to be provided by the insurance scheme, and would coöperate with its officers in providing on consultative lines the additional special professional help which they were best fitted to provide, they would seriously handicap the insurance service and imperil their own future as independent institutions.

Mr. J. COURTNEY BUCHANAN (secretary of the Metropolitan Hospital) contributed a paper on

The Future of Voluntary Hospitals.

He urged that hospital managers should follow the wise course of the British Medical Association and set themselves to define beforehand the work their experience taught them they could do best. After touching on the effect of the Bill in drying up the sources whence hospitals derive their funds, Mr. Buchanan declared that the introduction of a system of charging insured patients was inevitable. In future hospitals would be forced to act solely in a consultative capacity towards the poorer classes. Trivial cases need no longer be treated at the hospitals; these would be seen by the insurance doctors. As he understood, the doctors would prefer to see the insured patients at some centre; these might be institutions conducted very much on the lines of provident dispensaries. These should be grouped around and be in touch with voluntary hospitals. School medical treatment might also be carried out in them. In his opinion it would be little short of a calamity if hospitals were subjected to any municipal control, but he could see no objection to hospitals being paid for work done for the insurance authorities, or even to State grants-in-aid for specific purposes, always provided that if the hospitals had to be subjected to public inspection it was carried out by experienced people. A central council might be established for this purpose; it would leave hospitals free to develop their own particular characteristics, while securing uniformity in matters where uniformity was really desirable, such as methods of admission, &c. The day had gone by, he feared, when the provision of help for the sick would suffice to draw enough money for the hospitals' support. The only reasonable ground for hoping that the hospitals could still be maintained by voluntary contributions lay in the attraction that the more expensive forms of medical treatment and the advancement of medical education and scientific research

now held for wealthy and philanthropic people. The future policy of the hospitals should be to show clearly that the work they did was for the benefit of the whole community, and for this purpose to maintain their special services in the highest perfection.

Mr. NEVILLE CHAMBERLAIN (Birmingham) contributed a paper on

The Reform of Out-patient Departments of Hospitals,

remarking by way of preface that while the Insurance Bill would render impossible the remedies he had in mind before its introduction, it would also, he hoped, remove in large part the evil those remedies were designed to meet. Probably everyone would agree that the work of out-patient departments was the least satisfactory part of modern hospital routine, whether looked at from the point of view of the hospital, the medical profession, or the patients who came to the departments for treatment. Instead of confining themselves to consultation and cases of immediate urgency, as was intended originally, the out-patient departments, with their elaborate and expensive apparatus, their trained nurses and experienced consultants, had allowed themselves to be turned into great free dispensaries. Really serious and important cases were jostled and thrust aside by people with cut fingers or common colds, or, what was perhaps worse, by chronics whose chances of cure lay rather in careful nursing and home treatment than in periodic visits to a distant institution. The result was an ever-increasing crowd of applicants for relief with a corresponding diminution of the amount of time devoted to each individual. Hospital managers chafed under a sense that the money of the subscribers was being wasted, patients grumbled at the long waiting, while the medical practitioner outside bitterly commented on the difficulty of earning a livelihood in competition with an institution which was not run on commercial lines, but offered gratis the knowledge and experience he had spent his time and money in acquiring. Proceeding to consider remedies for this state of things, Mr. Chamberlain mentioned how difficult it had been found in practice at the Birmingham General Hospital to get the staff to sort out applicants for relief and advise trivial cases to apply to their own doctor, to a dispensary, or elsewhere. The only chance appeared to lie in applying pressure on the people themselves. Mr. Chamberlain outlined "an ideal system of medical relief" as follows:—

1. Every person should contribute towards the cost of treatment.
2. Every person should be attended in the first instance by his own doctor, but should have power to change his doctor at intervals.
3. Drugs should not be dispensed by a doctor but by a chemist or dispensary.
4. Patients requiring institutional treatment should be admitted to the hospital as in-patients, or should obtain consultation or treatment on the recommendation of any qualified medical man without the necessity for subscribers' letters, &c.
5. Paying wards should be established for those in better circumstances.

An endeavour had been made to fulfil some of these conditions in Birmingham by the establishment of a provident dispensary. Mr. Chamberlain described the methods of this institution, which a medical speaker later in the meeting paid the tribute of describing as free from the defects of most similar undertakings. Among the hindrances to the success of the dispensary Mr. Chamberlain mentioned the apathy of the medical profession and the stringency of medical etiquette which made no distinction between canvassing for a private individual for his personal benefit and canvassing for a properly managed provident institution primarily for the benefit of the members themselves. Medical men had failed to recognise the trend of modern legislation and to see that the only alternatives open to them were an extension of the provident dispensary system and some form of State interference. The growth of dispensaries had been checked and the consequence was that the community had been led to interfere more and more in medical relief. Already in Birmingham the number of beds in rate-supported hospitals far exceeded those in voluntary hospitals. The Insurance Bill, following the lines of previous legislation, had brought the State at one bound to the doors of the hospitals, and by the introduction of the compulsory principle had rendered superfluous the provident dispensary. What would be the effect of the new system upon the out-patient departments? He hoped it would bring about the reforms they all desired. Every man would go first to his own doctor; if he came to the hospital first it would be easy to refuse treatment, and the staff would be haunted no longer by the bogey of a public scandal following on a "spiteful death on the doorstep." He did not think the expense or the numbers of the out-patient departments would greatly decrease. There would be a larger number of difficult, protracted, and expensive cases, but the hospitals would be relieved of the greater portion of the trivial cases which were now such a clog upon their working. Subscriptions, however, must decrease owing to direct taxation of sources of hospital income. He did not agree with a system of *per capita* contributions from the State as likely to give rise to disputes. He would like to see sums of money allotted to hospitals on the lines of State grants to universities.

Dr. E. D. KIRBY (Birmingham) read a paper on

Some Local Aspects of Hospital Reform.

In Birmingham, he said, the medical institutions had allowed themselves gradually to be perverted from charities into provident institutions. That was to say, the working classes had been permitted to subscribe to them for their own benefit. It might be regarded as an intelligent anticipation of the Insurance Bill, with the significant exception that no provision at all was made for any payment to the medical profession. In illustration of this statement Dr. Kirby gave an account of the history of the General Dispensary showing how the practice of compulsorily deducting a penny a week from workmen's wages towards the Hospital Saturday Fund had led to people claiming as a right services which were instituted as a charity.

Dr. J. B. BRIERLEY (Manchester), opening the discussion, remarked that the reason the medical profession had been dubious of provident dispensaries was that they had not been able to secure an income limit for members.

Dr. J. H. KEAY (Greenwich) thought the spirit animating the papers read augured well for hearty coöperation being secured between medical men and hospital managers in meeting the altered circumstances brought about by the Insurance Bill. As to the reform of out-patient departments, he thought a few prosecutions of well-to-do people who abused them would be highly effectual.

Dr. D. J. MACKINTOSH (Glasgow) said that the Bill would assist in doing away with hospital abuse if it existed. Voluntary hospitals had a hand-to-mouth existence at present, and they could not continue to exist unless funds were forthcoming. He objected to hospitals accepting grants from the State, but saw no difficulty in their receiving payment for individual cases.

Dr. J. H. TAYLOR (Salford) thought control of hospitals by the Insurance Commissioners would not be as objectionable as State control, because on the former body there would be medical representation.

Mr. JAMES NEAL (Birmingham), Dr. WALLACE HENRY (Leicester), and Mr. G. JACKSON (Plymouth) also took part in the discussion, all emphasising the point that if insurance patients in hospitals were paid for, the medical staffs could not be expected to give their services voluntarily.

The readers of papers then replied, and on the question of the method of payment, if it was found that the State must come to the aid of the hospitals if the Bill was passed, Mr. CHAMBERLAIN pointed out that the estimated loss of income at different hospitals varied widely. A *per capita* grant would therefore not compensate some of the hospitals for their loss.

NEUROLOGY AND PSYCHOLOGICAL MEDICINE.

THURSDAY, JULY 27TH.

President, Dr. EDWIN GOODALL (Mental Hospital, Cardiff).

The subject set down for discussion was

Trauma in Relation to Nervous and Mental Affections,

which was introduced by Dr. F. W. MOTT (London), who began by emphasising the importance of distinguishing between cause and coincidence of head injury in relation to nervous and mental disease, also of recognising that head injuries are not infrequently the result of nervous or mental disease. His experience was drawn chiefly from asylum work, and it was curious how few actual cases of head injury with trephining for it he had observed. Out of 20,000 cases there were less than 20 of this kind, and in a series of 2000 necropsies on insane cases there was only one. That head injuries might cause insanity was admitted, although it was of the first importance to elicit the details

of the family history in all such cases. Dr. Mott quoted the case of a shipwright who had fallen down a ship's hold and fractured the cranial base and vertex. The man was taken to Poplar Hospital, and eventually discharged with his mind somewhat affected. On coming under Dr. Mott's observation at Claybury a diagnosis of general paralysis was made, although there was no Argyll Robertson pupil. The patient gradually sank and died, and at the necropsy were found chronic basal meningitis, caries of the petrous bone, and internal hydrocephalus, also a choked optic disc on both sides. The association between the injury and the disease was apparent. On the other hand, a patient who fell 40 ft., fracturing his skull and sustaining a considerable loss of frontal lobe tissue, became irresponsible and immoral thereafter, and had to be transferred to an asylum. In his case there was a marked family history of insanity. Another case quoted was that of a child who had had a bad head injury, with fits and subsequent imbecility. Naturally the friends attributed these to the injury, but at the post-mortem examination microgyria and porencephaly were found, showing that the epilepsy and imbecility could not possibly be attributed to the accident. Dr. Mott quoted other cases, and took up the general attitude that the relation of head injury to insanity was very slight. In five years of his Charing Cross Hospital experience he had seen 65 cases of head injury, of which 22 died in hospital. He had been able to follow up 13 cases of severe head injury, all of which patients developed the characteristic symptoms of traumatic neurasthenia. Yet all eventually recovered, with the solitary exception of one who was transferred to an asylum. He had been able to get certain figures from the admissions to Bexley Heath Asylum. Of 7640 admissions there were only 16 males and 20 females in whom a possible relation of injury to insanity might be considered. But in every case the injury was contributory rather than primal. Dr. Mott quoted a number of instructive cases where the possible relation of injury to the development of general paralysis had to be considered, and went fully into the medico-legal aspect of these cases. He pointed out how head injury might easily be an accelerating factor in the development of nervous and mental disease, and quoted illustrative cases.

Dr. BYROM BRAMWELL (Edinburgh) said the chief difficulty in many cases was to determine whether the patient who had had an accident, and thereafter developed definite nervous symptoms, was nervously healthy at the time of the accident. This was true especially of epilepsy and general paralysis. Careful inquiry often showed that the patient was not in perfect nervous health at the time. Dr. Bramwell said he had seen cases of gumma of the brain, tuberculoma of the cerebellum, and other intracranial growths, apparently excited by injury, and it was quite reasonable to suppose that occasionally injury was the direct exciting cause. He had seen general paralysis resulting, as far as could be judged, from an injury. He entirely agreed with Dr. Mott that until the question of compensation was settled most traumatic cases of neurasthenia did not improve. He often told such patients that if they really wished to get better they must first settle all matters relating to compensation.

Dr. G. E. SHUTTLEWORTH (London) alluded to the frequency—indeed, the constancy—with which friends and others attribute the maldevelopment of defective children to injury either before, during, or after birth. Most parents were unwilling to admit hereditary tendencies, or that there were deeper causes for mental defect than accident. He could not agree with American statistics, which seemed to show that in 2 per cent. of mental defectives the result was due to attempts at abortion. He thought the attribution of mental defect to the use of the forceps at birth was erroneous; the timely use of the forceps saved many infants from the risks they would otherwise have run of sustaining head injuries. It was his experience, with regard to trauma in childhood, that after a fall out of a perambulator the parents began to observe their child more closely, and hence to notice symptoms which had hitherto escaped their observation.

Dr. J. S. RISIEN RUSSELL (London) called attention to the question more particularly of traumatic neurasthenia. He was bound to admit that sometimes trivial injuries resulted in extraordinarily severe symptoms, which could not possibly be simulated, and quoted illustrative cases. He thought, also, that compensation was due if pre-existing disease was accelerated by the injury or if its development was accelerated. He considered that the future of many traumatic cases depended on the age of the patient and the condition of his blood-vessels, especially those cases of severe traumatic neurasthenia where mental symptoms predominated. He agreed that trauma might definitely start a nervous lesion in a syphilitic individual. Further, the effects of a trauma, such as to result in actual structural damage, did not need to be immediate.

Dr. F. E. BATTEN (London) also referred to delay in the production of nervous lesions after an injury. He questioned very much whether actual organic disease of the central nervous system could develop after an injury. He could not subscribe to the views expressed by Dr. Bramwell and Dr. Russell in regard to this point. He had difficulty in imagining how a progressive weakness could follow an injury. He thought the condition after the injury was over would either remain stationary or would tend to improve. Dr. Batten was not able to agree with Dr. Mott that the Wassermann reaction was positive in practically cent. per cent. of general paralytics, and quoted cases in support of his contention.

Dr. NATHAN RAW (Liverpool) remarked how few actual cases of insanity followed head injury. In a series of 137 cases of general paralysis observed by him in the last 14 years, eight were attributed to injury. Careful inquiries, however, resulted in the fact that in six of the cases a definite history of syphilis was obtained, and in one other case general paralysis had been diagnosed before the injury occurred. The injuries alleged were as follows: severe injury to spine, fall of hammer on top of head, explosion with injuries to the face, fracture of cranial vault, fracture of frontal bone, severe kick from horse, general injuries to head, and concussion of brain. Necropsies were made in two fatal cases, and the typical appearances of general paralysis were observed, but no evidence of injury either to the skull or brain could be discovered. Dr. Raw concluded that trauma was not a cause of general paralysis *per se*, but that in persons who were predisposed to the disease a severe injury might accelerate its onset and cause a rapid progression of the symptoms with an earlier fatal termination.

Dr. W. J. MIDELTON (Bournemouth), Dr. D. COLQUHOUN (New Zealand), Dr. G. M. ROBERTSON (Morningside Asylum), Dr. J. G. SOUTAR (Gloucester), Dr. J. MILLS (Ballinasloe), Dr. W. SALISBURY-SHARPE (London), and Dr. EDWIN BRAMWELL (Edinburgh) continued the discussion. Dr. MOTT replied.

Professor B. PFEIFER (University of Halle, Germany) then read a paper on

Brain Puncture for Diagnostic Purposes.

He said that in cases of intracranial abscess, cyst, tumour, &c., it was often advisable to substantiate the diagnosis by the method of brain puncture, the technique of which had been considerably improved by himself. He thought that for diagnostic purposes the method was valuable, and it had received the support of various distinguished German surgeons, notably Krause and Borchardt. His method is as follows. The scalp over the area to be explored is anæsthetised with a spray, and a borer of 3 mm. diameter, worked by electricity, is used to drill through the bone. The needle, of platinum and iridium, 1 mm. in diameter, containing a silver wire inside, is introduced through the membranes and into the brain a given measured distance—say, 3–4 cm. The wire is then withdrawn and a syringe fitted to the needle, with which the operator's assistant aspirates into the tube a cylinder of brain tissue 1 mm. in diameter and 3–4 cm. long. This can be fixed, cut in serial section, and suitably stained. Professor Pfeiffer has found the operation practically painless, has performed it in a number of instances successfully, and reported a series of 13 new cases, in every one of which a positive finding was obtained. In one case death ensued in a few hours owing to the needle having punctured the artery of the corpus callosum, which, post mortem, was found to have been displaced from its normal position by a tumour. Sections were shown on the lantern of some of these cases, in which an exact local and histological diagnosis had thus been made; the tumours found included glioma, sarcoma, endothelioma, carcinoma, cholesteatoma, and cysticercus cyst.

Dr. E. F. TREVELYAN (Leeds) and Dr. R. T. WILLIAMSON (Manchester) discussed the paper.

OBSTETRICS AND GYNÆCOLOGY.

THURSDAY, JULY 27TH.

President, Professor EDWARD MALINS (Birmingham).

Professor PAUL STRASSMANN (Berlin), in opening a discussion on

The Present Position of Vaginal Operations in Relation to the Uterus and its Adnexa,

observed that laparotomy in gynæcological surgery is now not such a necessity as formerly. The following reasons may be cited in support of this thesis: (1) very large tumours of pelvic origin are far less common; (2) the tendency of modern treatment is towards conservatism; and (3) the percentage mortality of vaginal operations is less than that associated with laparotomy. Abdominal sections for disease of the pelvic viscera have certain well-defined disadvantages. In the first place, peritonitis is more frequent than after vaginal cœliotomies. This is in part due to the unavoidable contact with the intestines and omentum, and is to some extent aggravated by the Trendelenburg position. The trauma received by intestines and omentum in packing these structures away from the scene of operation is shown later by the presence of omental adhesions and stomach troubles. The discomfort arising from this cause is frequently diagnosed as hysteria, and serves but to emphasise the necessity for exercising great care in all manipulations of the omentum. Both peritonitis and intestinal paresis are largely avoided when the vaginal route is used. A further argument against laparotomy is the risk of hernia. Although this risk is to some extent obviated by the transverse fascial incision of Küstner and Pfannenstiel, it does not entirely eliminate the danger. Nevertheless, the abdominal incision certainly has a very definite sphere. The speaker recommended that it be employed for all tumours of doubtful origin. The vaginal operation for tumours requires an extensive differential diagnosis, and hospitals without a special gynæcologist will always prefer laparotomy. Fibromyomas should only be removed by the abdominal route when they are larger than the head of a newly-born child. At the most one-fifth of the operative cases of fibroids require laparotomy. Carcinoma of the cervix is best removed by laparotomy, except in the case of fat or elderly women or in the presence of severe constitutional disease, when the vaginal route is preferable. Carcinoma corporis uteri, on the other hand, may be dealt with quite satisfactorily by the vagina. Abdominal section is indicated also when appendicitis is suspected. Although Ott's speculum has removed some of the difficulties and rendered the vaginal operation quite possible, laparotomy is to be preferred. It is a point of considerable importance, therefore, in the diagnosis of cases of pelvic inflammation to eliminate the appendix as the *fons et origo mali*. Professor Strassmann then proceeded to explain the numerous advantages which the vaginal route offered. There was much less shock, and a corresponding smaller mortality. Convalescence was more rapid, and the after-effects due to adhesions or hernia entirely avoided. He was surprised at the disproportion that existed in numbers between obstetrical and gynæcological vaginal operations. The majority of vaginal sections became quite easy with practice, and even large cystic tumours can be removed with less trouble than is experienced in a craniotomy. For intrapelvic diagnosis Ott's speculum has provided the gynæcological surgeon with a very valuable weapon. In removing structures, however, it is better to rely on palpation. Disadvantages that have been urged against vaginal cœliotomy are: (1) the lack of sufficient room; (2) the danger of injuries to the bladder and ureters; and (3) the failure of primary union in the vaginal cicatrix, and the production of a weak scar and possibly hernia. Additional space for the vaginal operation may be gained by the use of perineal incisions and efficient retractors. Vesical and ureteral trauma is avoided by experience and the use of an "anterior flap" incision. Trouble with the cicatrix is more illusory than real. The indications for anterior and posterior vaginal incisions were clearly defined, and the steps of the "flap" operation carefully described with the aid of diagrams and instruments. The vaginal route offers exceptional advantages in the treatment of certain well-defined conditions. Tubal pregnancy, e.g., is easier to remove vaginally when the gestation is early and the rupture recent. Hæmatoceles should always be incised vaginally. Pelvic inflammatory exudates and pyosalpinx are better evacuated by a posterior vaginal incision than through a laparotomy wound. Drainage is much more easily maintained and the risk of general peritonitis reduced to a minimum. Convalescence is usually rapid in such cases. Again, in displacements of the uterus ventral fixations and Alexander's operation are but rarely called for. The ideal operation, in the speaker's opinion, is vesico-vaginal fixation. Great value is attached to a vaginal incision for exploratory purposes. Many pelvic ailments of women are seen where such an incision would permit of effective treatment—e.g., the separation of pelvic adhesions, stomatoplasty upon the Fallopian tubes, and the excision of small ovarian hæmatomata. Laparotomy for such conditions is too severe an operation, and associated with too many risks.

Dr. HERBERT R. SPENCER (London) congratulated Professor Strassmann upon his excellent paper, and was in complete accordance upon many points. He quite agreed with the conservative measures that were advocated, and he deprecated the resort to laparotomy in many cases of what is called the "acute abdomen." The sacrifice of many inflamed appendages by general surgeons is a scandal. A posterior vaginal incision in the majority of cases is all that is required. He did not agree with Professor Strassmann's references to the frequency of hernia after laparotomies, and he was disappointed to hear that catgut was recommended. In spite of Professor Strassmann's vigorous advocacy of the vaginal route, he thought that he still preferred laparotomy. The operation for fibroids is much "cleaner" by this means, and ovarian tumours can be removed entire—an important factor, since malignancy cannot always be diagnosed before tapping. Furthermore, it is much easier to control the bleeding from adhesions when the abdomen is open; and, finally, it is not infrequent to find sinuses existing between a pyosalpinx and intestine.

Dr. AMAND J. M. ROUTH (London) considered that vaginal operations are nowadays much neglected. He had had the advantage of being compelled to practise the method, as laparotomies were not permitted to gynæcologists at an institution to which he had the honour to be attached. He thought that the younger men favour abdominal work nowadays, because many of its dangers no longer exist, and the low mortality of vaginal operations is no longer a stimulus to counterbalance the difficulties. He had seen Ott's speculum in use, and thought that it had a useful sphere in the diagnosis of deposits, &c., but that it did not facilitate the removal of parts. He was quite in accord with Professor Strassmann on many points—e.g., the great value of vaginal drainage and the conservative treatment of salpingitis. In many cases of pelvic peritonitis all that is necessary is a posterior vaginal incision. Fibromyomata, if larger than a fist, are better removed through the abdomen. Carcinoma of the body of the uterus and early cases of carcinoma of the cervix can be treated by the vaginal route.

Dr. J. B. HELLIER (Leeds) remarked that he had employed the abdominal route for many years, and was much in favour of it. He believed in dealing with adhesions "by the light of day," and thought that all ovarian tumours, except the very largest, should be removed entire. One reason against vaginal sections that he particularly urged was the difficulty in checking bleeding. Furthermore, he did not think that infection of the general peritoneum was at all common in dealing with suppurating conditions in the pelvis through the abdomen, but he believed that vaginal drainage in these cases was the right procedure. Another reason that made him prefer the abdominal route was the fact that malignant disease of the intestines or other viscera is sometimes found in the course of a laparotomy.

Dr. C. E. PURSLOW (Birmingham) emphasised the danger of tapping ovarian tumours either during the course of laparotomy or vaginal section. He thought that rupture of an ovarian cyst might readily occur during the manipulations required to expose it by the vaginal route. Should the tumour be malignant or of dermoid nature the results might be disastrous. He also acquiesced in emphasising the extreme danger that some operators run in attacking from the abdomen a pelvic peritonitis secondary to abortion, &c. A vaginal incision relieved many of these cases at once. Exploratory vaginal cœliotomy might be advantageously employed in the diagnosis between some cases of pyosalpinx and tubal gestation.

Dr. A. W. RUSSELL (Glasgow) considered that hæmorrhage in the course of vaginal operations may be practically eliminated by the use of clamps, which are removed in 24 hours. He had used this method for years and had never

had any trouble with venous oozing. He always employed catgut ligatures and removed the whole of a gauze drain by the end of 48 hours after operation.

Dr. THOMAS WILSON (Birmingham) also advocated the use of catgut. He had never seen tetanus or secondary hæmorrhage resulting from its use. For uterine displacements he preferred Alexander's operation or some form of intra-abdominal fixation. For prolapse after the menopause he had had very good results from vesico-vaginal interposition. As regards the choice of operation for carcinoma, he could not agree that early cases should be subjected to vaginal section. He had frequently found that these "early" cases recurred, and advised, therefore, a radical Wertheim operation. Also, in "body" carcinoma cases only one in ten in his practice remained well after five years if dealt with by the vaginal route.

Dr. JOHN CAMPBELL (Belfast) observed that he was not quite convinced by the eloquent advocacy by Professor Strassmann of vaginal surgery. In cases of doubt he would always use abdominal methods. He was of opinion that uterine fibromyomata could be removed much more speedily through the abdomen than through the vagina, and this must have some effect upon the mortality-rate. He always preferred catgut for buried sutures, and hoped that the use of unabsorbable ligatures would soon become obsolete.

Mr. E. STANMORE BISHOP (Manchester) considered that the choice of route must depend upon the case, and be decided by the surgeon in charge. In the matter of ruptured tubal gestation, he thought that the most important factor in treatment was the rapid cessation of the hæmorrhage. This was not easily effected by the vagina and the ligatures were liable to slip. As regards post-operative cystitis, he did not believe the route employed had anything to do with it. The use of the catheter was the one and only cause.

Mr. E. W. SCOTT CARMICHAEL (Edinburgh) was of the opinion that no vaginal section for carcinoma was in accordance with scientific findings. It was quite impossible to excise completely the lymphatics by this route and he therefore strongly advocated abdominal operations for malignant disease. Ovarian cysts and severe degrees of pelvic inflammatory disease should be treated by laparotomy, but for the milder inflammatory conditions vaginal cœliotomy was satisfactory.

Dr. MARY THORNE (London) thought that the mortality of vaginal sections for fibromyomata was too high to prove conclusively the value of the route.

Dr. R. J. JOHNSTONE (Belfast) agreed with Professor Strassmann in that tubal gestation was treated most effectively by means of the vaginal route. He also preferred a vaginal incision for most inflammatory pelvic diseases. For most other conditions he regarded laparotomy as the operation of choice.

Dr. J. E. GEMMELL (Liverpool) regarded the abdominal route as being much cleaner and safer.

Dr. M. HANDFIELD-JONES (London) emphasised the danger, from the educational standpoint, of a too free advocacy of the charms of vaginal section. Amongst experts the operations undoubtedly were quite safe, but if they became general he was afraid that the mortality would at first be very high.

Professor STRASSMANN in reply, quite agreed that carcinoma should be attacked from the abdomen whenever possible, and a wide excision of lymphatics was indicated. He was surprised to hear that certain speakers disagreed with the use of catgut for buried sutures. If properly prepared with iodine he considered that it was quite safe. The material was very largely employed in Germany and he had never seen tetanus arise from its use. He thanked the section most heartily for the great interest that it had taken in his paper and for the excellent discussion that had followed.

ODONTOLOGY.

THURSDAY, JULY 27TH.

President, Professor F. EARLE HUXLEY (Birmingham).

A paper on the Incidence and Natural Arrest of Caries was read by the SECRETARY in the absence of the author, Dr. W. WALLACE (Glasgow).

Mr. A. S. UNDERWOOD (London) contributed

Some Remarks regarding Two Antral Cases.

He pointed out that the gorilla had septa in its maxillary sinuses which appeared to divide them into two separate chambers. In reality, however, inflation of the nasal duct, which was brought about probably by the vocal habits of the animal, encroached on the antral wall and gave it this appearance. He exhibited a human skull in which the nasal duct was inflated, simulating antral division, and spoke at some length on the difficulties of operation for relief of suppurative conditions of this cavity, and in his reply said that the accessory cavity was commoner on the left than on the right side—viz., in the proportion of 1 to 3—the usual position being that of the region of the third molar in each case.

The PRESIDENT, Professor JOHN HUMPHREYS (Birmingham), and Mr. HERBERT SMALE (London) took part in the discussion.

Mr. A. W. WELLINGS (Birmingham) then gave a lantern demonstration of

An Interesting Abnormality of the Dental Tissues.

In the ensuing discussion Mr. A. HOPEWELL-SMITH (London) expressed the view that the tooth tumour shown was probably due to fusion of two tooth germs, with a hollowing out of the intervening space; Mr. UNDERWOOD likened the condition to the folded character of the poison fang of the viper; and Mr. J. G. TURNER (London) suggested that it represented a calcified unilocular cystic tumour. Mr. HUMPHREY HUMPHREYS (Birmingham) endorsed the opinion of the first speaker.

Mr. J. G. TURNER, reading a paper on

The Pathology of Retained Teeth,

believed that teeth often remained buried in the substance of the bones of the jaws without producing any symptoms of pain or discomfort. When a communication and septic infection occurred between the retained body and the mouth, or the antrum, or the nose, neuralgia might occur. Skulls in the Anatomical Museum at Cambridge and the Museum of the Royal College of Surgeons of England had been examined, the result being that the probable factors in the production of retained teeth were failure of development of the bone of the jaws, the influence of sex, the displacement of tooth germs, the premature removal or undue retention of deciduous teeth, general and local diseases, and the presence of supernumerary teeth. He showed a number of slides and preparations to illustrate his subject.

This paper was discussed by Professor JOHN HUMPHREYS and Mr. HOPEWELL-SMITH, who inquired of the author whether his researches threw any light on the development of cystic fluid around these retained teeth; whether traumatic influences, such as those set up by foreign bodies in the mouth, had any effect without direct bacterial infection; and whether, by studying these pathological conditions, it was possible to explain the physiological processes connected with the normal eruption of the teeth.

Mr. A. BRITTEN (Birmingham) also spoke.

Later, the members of the Section adjourned to the Dental Museum, when Professor JOHN HUMPHREYS gave a discourse on the story of evolution of vertebrate life from geological times as shown by the most indestructible portions of the bodies of animals. Specimens of the teeth of ganoid and other fishes from the Silurian, Devonian, and Carboniferous epochs were passed round for examination, including orodus, strophodus, and the predatory sharks of the cretaceous periods. Reptiles were represented by the marine lizard ichthyosaurus, pliosaurus, plesiosaurus, iguanodon, and the miocene charcarodon. He concluded by briefly referring to the teeth of mammals of an archaic type—viz., palæotherium, hyopotamus, rhinoceros, hippopotamus, red deer, and the bison of pleistocene times.

OPHTHALMOLOGY.

THURSDAY, JULY 27TH.

President, Mr. HENRY EALES (Birmingham).

A discussion on

The Etiology, Diagnosis, and Treatment of Concomitant Squint and Heterophoria

was opened by Mr. CLAUD A. WORTH (London), who said that any historical survey would be out of place, but the names of four great workers in this field would be in everyone's mind—Donders, Javal, Priestley Smith, and Maddox. Convergent squint: In a normal-eyed person the two sets of

visual impressions received by the two eyes are fused in the brain into one picture. In order that fusion may take place the direction of the visual axes must correspond. The cerebral faculty of fusion determined the effort of the oculomotor apparatus to this end. When that faculty was perfect even gross displacement of the visual axes, such as could be produced by prisms, could be overcome, so a want of balance of the motor apparatus would not cause squint, but heterophoria. If the fusion faculty was temporarily in abeyance—e.g., when one eye was covered—the eyes would deviate. In hypermetropia there was a tendency to excessive convergence during accommodation, but in the interest of binocular vision this was checked. In forcible deviation, as in paralysis of an external rectus, there was persistent diplopia. Contrariwise, in the absence of fusion faculty there was no reason for accord in the visual axes, and any disturbing factor, hypermetropia, motor defect, or mental disturbance, caused squint. The controlling factor was referable to the brain; further than this one could not go. The onset of squint was most frequent in the second and third year. He thought that some fusion faculty was present and remained effective until particular strain, illness or school, rendered it insufficient in the face of ocular difficulties. The belief that squint was determined by motor difficulties was negatived by cases of motor imbalance, where so high a defect as 15° could continue without squint. Considering the amblyopia of squint, he held that at least 90 per cent. of amblyopia in squinting eyes was acquired. In the rare cases of amblyopia without squint there was usually a high degree of astigmatism in the amblyopic eye and none in the other eye: in these cases it appeared that the amblyopia arose from the selective use of the good eye. In the treatment of convergent squint he recognised three aims: (1) the cure of the "amblyopia ex anopsia," (2) the removal of the deformity, and (3) the securing of binocular vision. Measures for the attainment of the final result were: 1. Atropising of the fixing eye only; this was only of use when the squinting eye retained the power of fixation. 2. Occlusion of the fixing eye when the squinting eye had lost the power of fixation. There should be total occlusion of the eye for at least one month; more than that was rarely necessary or useful. 3. The exact correction of errors of refraction. He did not hesitate to do this at as early an age as three months, for it was now certain accommodation came into play at an early age. 4. Operation. As a rule this should not be attempted until all other means of rectification had failed. Simple tenotomy for the rectification of squint he did less and less; he relied now almost entirely upon advancement of one or both external recti. There were two varieties of divergent squint which had an entirely different origin. The first was associated with myopia of high degree, and was consequent on the increasing difficulty of maintaining excessive convergence. Since the eyes of school children had been systematically examined it had become less frequent. The second order he had called "neuropathic." It usually dated from infancy; it was occasional or constant, unilateral or alternating. There might be feeble fusion; more commonly it was absent. Only in the constant unilateral cases was there amblyopia; in others vision was perfect. Convergence was always defective, and the degree varied from day to day. The subjects of it were bright and intelligent but nervous. It was three times more common in females than in males. He held that in heterophoria there was a defect in the relative motor balance of the eyes kept in check by the fusion faculty. It was the reverse of squint. It was impossible in most cases to demonstrate any particular muscle defect, but the effect of it was manifest in an abnormal tendency to convergence, divergence, or vertical deviation. It was by no means uncommon to find that sufferers from "eye-strain," who had emmetropia in each eye, were deficient in motor balance, and that to this their trouble was due. Of the varieties of defect hyperphoria was the most troublesome, and the least common; in these last, for cases of moderate degree the use of prisms was invaluable, but for high degrees advancement of an inferior rectus was preferable.

Mr. H. H. B. CUNNINGHAM (Belfast) laid stress upon the hereditary or familial nature of squint; he had traced the characteristic in not a few families. Anisometropia in a more or less marked degree seemed a particularly effective ocular defect in determining a squint; the fusion faculty must be at a special disadvantage in such cases. On the general lines of treatment he was in agreement with Mr. Worth. On the matter of training, whilst he held instruments such as the "amblyoscope" and "diaphragm test" of the greatest value in children of fair age, something was wanted for very young children. For this purpose two colour pictures had been devised which, when looked at through red and green screens, showed which eye was fixing; by these pictures useful practice could be obtained. He agreed in the superiority of advancement over tenotomy, and in the importance of not including the artery of the muscle within the suture.

Dr. R. J. COULTER (Newport, Mon.) drew attention to those cases in which no error of refraction was found in early life, but later, after the existence of squint for some years, astigmatism appeared. He suggested that the abnormal pressure of the muscles in excessive convergence might induce the astigmatism.

Dr. J. B. STORY (Dublin) put the order of procedure in treatment as: (1) Correction of error of refraction; (2) occlusion of the fixing eye; and (3) advancement to correct deformity and permit of fusion training. As regards etiology, there were cases that he felt were not covered by current theories—cases where squint ought to have appeared, but in which there was none.

Mr. A. W. ORMOND (London) called attention to a record by Cheselden in the middle of the eighteenth century concerning the lack of appreciation of a patient at the restoration of his sight by cataract couching. It emphasised the fact that amblyopia did not appear unless vision was interfered with before it was properly established; once that was attained an amblyopia was unlikely to be complete at any time, and vision was recoverable. If vision was interfered with before it was properly established amblyopia tended to be marked and irremediable. He considered that every effort should be made to remove the squint by operative measures before training was undertaken.

Dr. W. B. INGLIS POLLOCK (Glasgow) said that in advancement it was necessary to exert particular care to obtain equal stress in the arrangement of the sutures, otherwise distressing hyperphoria might be caused.

Dr. MCREYNOLDS (Texas) had heard it said that American ophthalmologists over-emphasised the importance of muscle anomalies; he thought to-day's discussion dispelled that idea. Formerly there had been a large practice of partial tenotomies in the States; that had fallen into comparative disuse in favour of advancement. In one point their practice differed from that described by Mr. Worth; they did not sever, but folded and tucked in, the tendon.

Mr. N. BISHOP HARMAN (London) said the point in the paper of Mr. Worth that particularly interested him was the note concerning "neuropathic divergence." This defect he considered akin to such other cerebral defects as colour blindness and tone deafness; it was probably referable to an inherent weakness of the fusion faculty. There was great difficulty in treating it, just because the subjects of it never realised that they did squint. The wandering eye promptly returned to its duty when the patient was told of the squint, and they never could see it in their looking-glass! What they did not see they did not bother about. It was almost always the friends who objected to the squint. In the "diaphragm test" he had found a most satisfactory means of demonstrating the existence of the squint to these patients; they saw its effects for themselves, and that was the first step in any attempt to improve their condition. As regards heterophoria, he agreed in the influence these defects had in producing eye-strain, but he thought that this only held good for those people who did near work. He greatly preferred the practice of decentering the lenses worn by patients to secure prismatic effects rather than superadding prisms to the lenses. This was more convenient in prescribing, in manufacture, and in wearing.

Dr. K. PISCHEL (San Francisco) spoke of the superior advantage of sutures obtained from the tendons of rat tails in advancement operations.

Major R. H. ELLIOT, I.M.S., said that heterophoria as a cause of asthenopia was much more common in India than it appeared to be in England. Patients complained of its effects in India and remarked these disappeared when in England. He agreed with Mr. Bishop Harman that it was only necessary to correct the defect for the purposes of near vision.

Professor R. A. REEVES (Toronto) said that asthenopia from heterophoria was common enough in Canada. He found great benefit from the use of systematic exercise

with prisms. In advancement for squint there was a real danger of causing hyperphoria by inequality of the sutures. To avoid this risk he always stitched the shortened muscle to the old insertion of the muscle, end to end.

Professor PRIESTLEY SMITH (Birmingham) asked why Mr. Worth considered it better to advance the muscle to the edge of the cornea rather than in the manner Professor Reeves had just mentioned. The contrast of the old-time neglect of squint with their present-day careful educative methods was great, and this revolution they owed to the initiation of Javal.

Dr. N. H. PIKE (Cheltenham) said he had had good results in heterophoria by the use of prism exercises. The method was not nearly enough made use of.

Dr. T. HARRISON BUTLER (Coventry) said he wished to thank Mr. Worth for his operation; it had proved most satisfactory in his hands. He was in the habit of combining tenotomy of the opposing muscle with advancement, but the tenotomy was done so that its effect was temporary only or until the advanced muscle was secure.

Dr. ARTHUR GREENE (Norwich) asked what amount of improvement could be anticipated from atropising or occluding the fixing eye.

Dr. A. LITTLE (Bradford) asked how it was possible, as had been advised by Mr. Worth, that the exercise of the squinting eye should be carried out by the surgeon. How many sittings did it require?

Dr. A. HUGH THOMPSON (London) said that occlusion of the fixing eye for a long period was a serious handicap in the school life of the child. He had been in the habit of occluding the eye for only half the day, and with apparently good results.

Dr. J. GRAY CLEGG (Manchester) asked if training was of any use in securing restoration of vision in the squinting eye after the age of 8 or 9 years. He commented upon the existence of cyclophoria in patients without any indications of asthenopia.

The PRESIDENT said that to his mind the great change which had come about in their treatment of squint was due to the recognition that the amblyopia was caused by the squint, and was, therefore, ameliorable; and that it was not, as formerly held, the cause of the squint.

Mr. WORTH, in reply, said that as regards operation he did sometimes shorten and reattach a muscle to its old insertion, but in cases of considerable squint that did not give enough rotation, and it was necessary to advance the muscle to the corneal margin. It enhanced the action of the muscle considerably. He considered there was little risk of causing hyperphoria if the stitches were inserted parallel to each other and in line with the old insertion of the muscle. Occlusion of the fixing eye, he agreed, might occasionally be advantageously prolonged beyond four weeks, and at an older age than 7 years; but the willingness of the parents to take trouble had to be considered, and the risk of disappointment. At these late ages, when vision was improved, the gain was usually not great. For fusion training the most favourable age was from 3 to 6; 2 was too early to attempt it, and 7 mostly too late.

Dr. THOMSON HENDERSON (Nottingham) read a paper on

The Comparative Anatomy of the Ciliary Region.

He said that in the common farmyard quadrupeds (horse, cow, sheep, pig, cat, and dog) the regular arrangement seen in man did not obtain. The ciliary processes were not all the same size; they were smaller and more numerous towards the nasal side, and the smooth posterior part was absent. In effect it amounted to the prolongation of the retina forwards on the nasal side, a provision apparently correlated with the necessity for a wide field of vision towards the flank.

Mr. BISHOP HARMAN asked if Dr. Henderson had found any variation in this striking peculiarity in animals the shape of whose pupils were narrowed vertically, as the cat, or horizontally, as the horse or goat.

Dr. HENDERSON replied that there was no difference; both were alike in the advancement of the retina.

Dr. INGLIS POLLOCK read a paper on

The Treatment of Chronic Dacryocystitis.

He said that pathological examination of excised lacrymal sacs had enabled him to show that the subadenoid layer was greatly swollen and thrown into folds by a dense cellular infiltration. Such a condition was obviously unsuited to the older treatment of probing; rather, probing was likely to accentuate it and produce stricture. The dacryocystitis was secondary to a septic focus, most frequently in the nose, and its cure was best effected by regular and persistent lavage of the sac and duct. In private patients a short course of syringing usually effected a cure; but in hospital patients the results were not so satisfactory, probably because the condition was commonly advanced before they were seen. If after three months' lavage cure was not effected excision of the sac should be resorted to.

Dr. HARRISON BUTLER read a paper describing

A New Operation for the Extirpation of the Lacrymal Sac.

He said it was essentially a modification of Meller's operation. The site of the sac was rendered anæsthetic and anæmic by the injection of codrenine. The primary incision was through skin only; it took the form of a half circle with the centre at the canthus and a radius of 6 mm. The flap was carefully dissected up, avoiding buttonholing the skin or wounding the veins underlying the nasal side of the incision. The palpebral ligament was then isolated and the deep fascia split vertically so as to expose the sac. The sac was freed from its bed with blunt-pointed scissors and pushed down under the ligament. Then the canaliculi were severed, the sac drawn down towards the duct and twisted to the cord and cut off. The operation was bloodless and painless; no retractors were required, only sutures to hold back the flap and secure the ligament.

Mr. BISHOP HARMAN said that in his experience the difficulty of removing the lacrymal sac arose from attempts to see it. In this operation touch was better than sight. The bed of the sac could be perfectly defined by the sense of touch. To turn forward the contents of this groove, and then establish the actual position of the sac by means of a probe passed through the lower canaliculus into the sac itself, left no room for mistake. That done, he gripped the tissue between the fascia and bone and removed it bodily. The removed tissue contained the sac and little else. He did not hesitate to cut the palpebral ligament, and had never found any ill-effects for that procedure.

Mr. JOHN HERN (Darlington) agreed with Mr. Bishop Harman that removing the contents of the lacrymal groove was the best procedure. But he did not favour indiscriminate operation; most cases could be cured by syringing, preferably with weak iodine solution.

Mr. WORTH said that the practical abandonment of probing was a great advance; syringing should be the main procedure. Excision was a last resort.

Mr. CUNNINGHAM said enough attention was not called to the primary cause of dacryocystitis, which was commonly in the nose. Recently he had seen a case where cure of ozæna relieved the lacrymal trouble.

Mr. W. ALLPORT (Birmingham) said that in his experience it was never necessary to excise the sac unless intraocular operation was contemplated. His practice was to use silver styles, and their insertion and retention had the most beneficial effect.

Professor PRIESTLEY SMITH confirmed this statement of his colleague.

Mr. F. M. GRAINGER (Chester) also approved the use of silver styles, and in cases where abscess and fistula had supervened recommended the use of a little zinc paste to the interior of the sac; it destroyed the diseased mucosa and the fistula soon closed.

Mr. ORMOND said that styles were elusive things; he had once found three in one patient.

Mr. J. JAMESON EVANS (Birmingham) doubted if styles would cure the primary condition; excision secured a permanent result and relieved the patient of serious risks.

The PRESIDENT said he had tried both styles and excision; both procedures had their uses. He did not find any benefit in hollow styles over the solid. He agreed that more attention should be paid to the nasal conditions; when that was done sac troubles would probably disappear.

Dr. POLLOCK and Dr. BUTLER both replied.

PATHOLOGY.

THURSDAY, JULY 27TH.

President, Professor R. FRASER CALDER LEITH (Birmingham).

The PRESIDENT, in reopening the business of the meeting, stated that when the Committee decided on the subject for that day's paper they were divided as to whether a pure pathologist or a pure clinician should be asked to open the

discussion. They finally came to the conclusion that no one was better fitted for the task than Dr. Rolleston. He then asked Dr. H. D. Rolleston (London) to read his opening address on

The Pathogenic Action of Bacillus Coli.

Dr. ROLLESTON stated that it would no doubt be desirable to confine attention to the typical bacillus coli communis of the Escherich group, and as far as possible to exclude the intermediate group comprising B. enteritidis and the paracolon and paratyphoid organisms, and also the aerogenes groups. But this was hardly feasible at the present time, for many conditions and cases described as due to B. coli might really be examples of infections with coliform organisms of the intermediate group. The pathogenic action of B. coli was of great interest from the tendency in clinical medicine to regard the alimentary canal as primarily responsible for many diseases of obscure origin, such as rheumatoid arthritis, diabetes, &c. B. coli was widely distributed, rapidly invaded the body after death, and might be found in pure culture in cases not searched for anaerobic organisms. Great caution must be exercised before stating that B. coli was pathogenic in any given case. There was, perhaps, a possibility that the pathogenetic effect of B. coli might sometimes be underestimated rather than exaggerated. In Flexner's studies of terminal infections he found B. coli so often that unless there were special reasons he attached no pathogenic importance to their presence. Dr. Rolleston then stated that the agglutination test was not an efficient one in determining whether the B. coli found in pathogenic exudates was infective or no. He stated that Dudgeon in a long series of cases found it was extremely rare to obtain a well-marked agglutination reaction. Dudgeon placed more reliance on the opsonic and phagocytic indices. The association of B. coli with other organisms was on a different footing from the presence of B. coli alone. Dr. Rolleston suggested that the failure of antistreptococcal serum to check the course of puerperal infections might be due to the fact that in these cases the streptococci were often associated with B. coli. He discussed the clinical features of the reaction of the human infection by B. coli. In acute forms there was often high temperature with rapid oscillations, though experiments made with B. coli endotoxin showed a marked fall of temperature. He considered that in children, if malaria was excluded, rigors were almost pathognomonic of urinary infection with B. coli. In the chronic forms of infection with B. coli the long duration and liability of relapse after periods of quiescence were notable features. As regards hæmic infections with B. coli, he stated that there were probably less than 50 recorded cases in which the organism was found by blood culture. He mentioned three groups of cases: (1) resembling typhoid; (2) pyæmic; and (3) terminal infections, and invited discussion on the frequency with which septicæmia due to B coli occurred in fatal peritonitis and appendicitis. Reference was made to Adami's view on the bearing of subinfection with B. coli on the etiology of pernicious anæmia, hæmochromatosis, and hepatic cirrhosis. Metchnikoff's contention that indol and phenol produced by B. coli caused visceral lesions and arterio-sclerosis was mentioned, and reference was made to the production of arterio-sclerosis by injections of cultures of B. coli.

Dr. WOODS HUTCHINSON (St. Louis) stated that people were now so taken up by the fact that the alimentary canal was responsible for so much disease that some even went so far as to advise extirpation of the colon. He stated that in hook-worm disease in America the opinion generally held was that the profound anæmia was due to the passage of B. coli and its products through the walls of the bowel *viâ* the worm-bites. He held that many so-called gouty disorders were due to B. coli infections, and not to disorders of metabolism. He thought diabetes might be caused by an ascending infection of the canal of Wirsung and so of the pancreas by the B. coli, and that in diabetes the toilet of the alimentary canal was nearly as important as diet. He thought that many diseases were hastened to their end by infection with B. coli.

Professor G. SIMS WOODHEAD (Cambridge) said there were great difficulties in determining whether B. coli was the real and only factor at work. Mixtures of organisms of a most complicated character were found in the alimentary canal, and it was difficult to say which was the offending organism. He drew attention to the work of Cobbett and Graham Smith on grouse disease. They found that there was a constant relation between the number of animal parasites found in the cæca of grouse to the number of B. coli that could be detected in the organs and tissues; observations made by himself on the parasites of the alimentary canal of certain of the lower animals bore this out. Another difficulty was the variation in the pathogenicity of B. coli, becoming parasitic and saprophytic according as it grew in the tissues, in the intestinal canal, or outside the body. He stated that the nearer to human origin the B. coli is, in water contaminations by sewage, the greater is its pathogenic power, and that as soon as B. coli left the intestines and entered the tissues, so it became more active.

Dr. J. M. BERNSTEIN (London) argued that from the point of view of the clinical pathologist he considered that in any given case the diagnosis of coliform organism was sufficient, and that it was unnecessary to state the exact type of coliform organism found. He said that if a vaccine was prepared from the organism found and the patient treated with it, the exact definition of the organism was unnecessary, and that the labour involved was more than he as a clinical pathologist, and not a pure bacteriologist, considered justifiable. He considered urine free from pathogenic B. coli if cultures of 5 c.c. remained sterile, and did not consider, as Dr. Emery suggested, that B. coli present in 1 litre was pathogenic.

Dr. GEORGE DOCK (St. Louis) said that it seemed to him that many of the problems in pathology were closely connected with B. coli infection. He suggested that in future work in the B. coli group precise identification of the germ should be made, and he thought Adami's hypothesis regarding so-called subinfection very attractive, and that Opie's work was very suggestive. He drew attention to the increase of virulence of B. coli in animals given small doses of morphine, and thought it was disadvantageous to use morphine in B. coli infections.

Dr. J. H. THURSFIELD (London) mentioned the difficulty clinicians and pathologists had in identifying B. coli infections, and said that what was now wanted from the scientific pathologist was a clear indication of the means by which the organisms found might be classified, in order that the clinician and clinical pathologist might be able to correlate the symptoms found with the different types. Dr. Thursfield stated that in his opinon the prognosis as regards symptoms in urinary infections was good; prognosis as to freedom of the urine from the B. coli was bad, and he had not known of an adult who had become free bacteriologically, though in children such results were more frequent.

Dr. J. W. SMITH (Newcastle) referred to a case of chronic general dermatitis with acute exacerbations every three or four weeks, and affecting practically all the cutaneous surface, the cause of which was with difficulty discovered. A catheter specimen of urine was examined and found to contain large numbers of B. coli. An autogenous vaccine was prepared and the patient treated with it with complete success. She was having at the same time alkalies and sour milk.

Dr. W. D'ESTE EMERY (London) thought that Dr. Thursfield was unnecessarily pessimistic with regard to the prognosis of urinary infections with B. coli. He admitted that in many cases it was difficult to get rid of the last few organisms from the urine, but this was accomplished in a fair proportion, and in the great majority all symptoms could be removed by means of vaccines. In children the number of successes was even greater, and vaccines were not always necessary. He had never seen B. coli in the blood or cerebro-spinal fluid of patients suffering from B. coli infections, and insisted on the little value of agglutination tests in B. coli infections.

Dr. CHALMERS WATSON (Edinburgh) remarked that his experience of a large number of reports furnished to him by his bacteriological friends led him to agree with previous speakers that it was difficult to speak otherwise than of "organisms of the coliform group." He had found from reports sent to him that the morphological characters and bio-chemical characters of the bacillus from the same patient sometimes varied considerably at different stages of treatment. Dr. Rolleston had given a very comprehensive account of the clinical features of B. coli infections. Dr. Watson desired to emphasise the occurrence of symptoms in women in which asthenia was most marked usually associated with slight anæmia, and sometimes with slight enlargement

of the phalangeal joints, warranting the clinical diagnosis of rheumatoid arthritis, but which were the results of a B. coli infection. He considered the suggestion as regards gouty conditions very interesting, as he had long advocated the infective origin of this disease.

The PRESIDENT then addressed the meeting, and in congratulating the speakers on the excellency of the discussions, said that he thought disagreement between them on some of the points raised was the sign of a healthy condition, and that it was an inducement which weighed with the committee in choosing this subject for discussion. He regretted that the pure pathologist was so seldom able to meet his patients. He thought that the attention of clinicians should be drawn to the fact that great advances had been made as regards the exact determination of B. coli in the laboratory, and greatly deplored the suggestion that we should go back to the loose nomenclature of "coliform organism" in preference to the exact definition of the species involved. He considered the problem of the future to be the drawing up of definite bio-chemical and other tests, so that each worker would be sure that he was isolating the same organism. He believed that B. coli always bred true and would always give the same reactions.

STATE MEDICINE AND INDUSTRIAL DISEASES.

THURSDAY, JULY 27TH.

President, Professor ALFRED BOSTOCK HILL (Birmingham).

Dr. R. A. LYSTER (Winchester) read a paper on

The Need for Unification in the Public Medical Services.

He said that at the present time medical services were being provided for the public in the following ways: (1) By public health authorities; (2) by Poor-law authorities; (3) by county councils; and (4) by voluntary agencies. These services, he went on, although they overlapped to an astonishing degree in many ways, left many gaps. The overlapping caused a gross waste of public money, while the universal gaps represented a persistent and serious menace to public health. In reality there were other public medical services distinct from those he had already mentioned, such as factory surgeons, police surgeons, medical officers to the Post Office, and medical referees. These might be left out of consideration at first as they dealt with small sections of the public, but they would inevitably need coördination later. The central control of the public medical offices was in an almost equally chaotic condition, the Local Government Board, the Home Office, the Board of Agriculture, and the Board of Education all taking a hand in the supervision and control of purely public health matters, but each apparently acting quite independently of the others. The Local Government Board, in fact, appeared to be able to maintain the supervision and control of the great services—Poor-law and public health—in water-tight compartments without preserving any relationship with each other and without having any aims in common. From these causes resulted confusion and the obvious need for unification. Experience in the past ought to prove conclusively that independent authorities working on the same or similar lines led to wastefulness and inefficiency. The necessity for unification became apparent when one considered the unsatisfactory competition that took place between public health authorities, the Poor-law, and the voluntary agencies in the provision of institutional as well as out-patient treatment. The treatment provided, although unsatisfactory and often inadequate, was, as a rule, indiscriminate and liable to great abuse. Assuming that the need for unification had been proved, it now remained to suggest the lines upon which such could be arranged. The alternative principles to be followed were the combination of offices on the one hand and the unification of authorities on the other. The recent Order (1910) issued by the Local Government Board recommended that the medical officer of health could, with advantage, also hold the position of school medical officer, superintendent of the isolation hospital, certifying factory surgeon, police surgeon, public vaccinator, district medical officer, and medical officer to the workhouse. Such advice should have an important effect in educating public opinion, but the desirability, and especially the practicability, of such a method of unification must be carefully considered. An officer holding the above eight distinct and separate posts would be working under four authorities and with eight different conditions of appointment. The holding of the eight offices by one individual would not necessarily effect any coördination of work or bring about any real unification, so long as there were the different public bodies left to pursue their independent policies and to control his work. The advantage claimed for the above policy of the Local Government Board was that the officer could by these means be made independent of private practice. It was not likely, however, to have any extended trial owing to the opposition and mutual jealousies between the authorities chiefly concerned. The combination of offices might be found to be desirable as a sequence to the unification of authorities, but was not at all a promising procedure until that had taken place. The disadvantages of the present system did not arise from the multiplication of offices so much as from the number of authorities concerned. Each authority was independent, and, with the best of intentions, it was quite impossible for any coherent scheme of work to be arranged. The process of unification presented no insuperable difficulties, as all officials concerned could be taken over by the new authority, and the difficult problem of dealing with displacements from office would not appear. It would at once become possible to adopt a definite policy and to adjust the work so as to avoid overlapping, and yet leave no part of it undone. The fact that a scheme of unification was recently approved by the County Councils Association affords additional evidence of the desirability and practicability of such proposals. Recent developments in public administration indicated clearly that the unified service should be controlled by the councils of counties and county boroughs. If local committees were considered to be still desirable in county areas, it should be possible to arrange for a certain amount of local work to be given them so long as the organisation and coördination were carried out by the county council. Only when the unification of authorities was an accomplished fact would it be necessary and useful to discuss the advisability or otherwise of whole-time officials for public work. The gradual condensation of staffs by grouping together appointments as they fell vacant would be a simple matter if only one authority was concerned in such appointments, and the policy of the Local Government Board, as outlined in the Order (1910), would be quite easy to carry out. By very slight extensions of the plans suggested by the Local Government Board and the County Councils Association it would be possible to aim at the gathering together, under one medical officer, the work connected with general public health, school inspection, Poor-law out-door relief, inspection of midwives, work under Food and Drugs Acts, food inspection, prevention of river pollution, vaccination, organisation of voluntary work, &c. Local staffs would include sanitary inspectors and health visitors, while the central staff would consist of bacteriologist, analyst, veterinary inspector, and also under the control of the county council there would be an in-door staff consisting of resident medical officers of infirmaries, infectious disease hospitals, and sanatoriums.

Surgeon-General G. J. H. EVATT, A.M.S. (retired), urged the financial union of the charges for the Poor-law medical officers and the medical officers of health for the country as a preliminary step towards a closer union of those two classes of officials.

Dr. E. W. D. KITE (Sheffield) considered that certifying factory surgeons should have a central authority to report cases of unfitness.

Mr. HERBERT JONES (Hereford) protested that in the schemes for the unification of the medical service, with the county council as the centre and the county council medical officer of health as the administrative chief, the medical officers of health of the large districts were apparently ignored.

Dr. F. E. WYNNE (Leigh, Lancs) said his conception of the unification of the public health service was the establishment of a Department of Public Health with a Cabinet Minister at its head.

Dr. R. MURRAY LESLIE (London) was strongly in favour of some measure for the unification of the health service of the country. There was, no doubt, at present considerable wastage of effort on account of the overlapping of the work of the various State and voluntary health agencies. The office of the medical officer of health would naturally be the centre of the different local health agencies, and would be recognised as such.

Dr. A. E. LARKING (Buckingham) objected to the medical officers of health endeavouring to secure all the appointments. All schemes for the unification of the public health had the idea of subordinating the general practitioners to the medical officers of health. As a general practitioner, he thought that his class was the one to do the clinical work, and let the medical officer of health keep to his special work. The medical officer of health ought not to do any clinical work; he should devote all his time to public health work and to investigating into deleterious conditions reported to him by the practitioners of the district.

Dr. S. BARWISE (Duffield) said there was an entire misapprehension if it was imagined that the medical officer of health wanted in any way to undertake the work of treatment or interfere in the slightest degree with the independence of the general practitioner.

Dr. T. SHADICK HIGGINS (Birmingham) said that as a preliminary step to the unification of the medical services there should be unification of the present public health service.

The PRESIDENT said that the trend of the discussion seemed to show that all agreed that there was a need of unification, though in many cases some interests appeared to fear any extension of the power of the medical officer of health.

Dr. D. S. DAVIES (Bristol) read a paper on

Disease Carriers.

He said that in regard to State interference in the case of the chronic typhoid carrier, up to the present no solution as to what legislation was necessary and desirable had been arrived at.

Dr. E. W. GOODALL (London) said that however desirable it might seem to be to insist upon freedom from bacilli as a criterion of freedom from infection practice had shown that it was quite unnecessary and hardly worth the expense it entailed.

Dr. J. C. G. LEDINGHAM (London) agreed with Dr. Davies that some form of routine bacteriological examination of typhoid convalescents was essential before discharge and also that late control examinations should be made at the end of six months and one year.

Professor J. SPOTTISWOODE E. CAMERON (Leeds) said he was strongly of opinion that "return" cases of scarlet fever were most of them due to carriers. After eliminating all practical possibilities of inefficient disinfection—six weeks, nine weeks, or even longer before the discharge of the patient—there remained a certain number of cases in which the patient developed, when sent home, some nasal or other mucous discharge, although all such discharges were non-existent on being sent home and bacteriological examination showed no streptococci. They were greatly indebted to the bacteriologists. The debt would be infinitely increased if they would tell them what was the essential contagium vivum of scarlet fever.

Dr. H. J. EGERTON H. WILLIAMS (Sheffield) said that in his experience it was practically impossible to carry out a detailed and systematic examination of all cases of typhoid with the view of isolating carriers from the fact that trained assistance was insufficient.

THERAPEUTICS, INCLUDING DIETETICS.

THURSDAY, JULY 27TH.

Chairman, Dr. JAMES GALLOWAY (London), Vice-President.

In conjunction with the Dermatological Section a discussion was held on

Recent Developments in the Recognition and Treatment of Syphilis.

Mr. J. ERNEST LANE (London), who has been connected for more than a quarter of a century with the London Lock Hospital, opened the discussion, restricting himself mainly to a consideration of the clinical aspect of the subject. About seven months ago the introduction of salvarsan was a valuable addition to the therapeutic stock for the rapid relief of symptoms, though as a cure the speaker did not consider it displaced the time-honoured method of treatment by mercury. He wished to check immoderate enthusiasm and issue a warning not to expect too much of this new agent, which had certainly been over-estimated at first and had raised people's hopes that syphilis would now be easily curable. He quoted the *Times* of Dec. 19th, 1910, in this sense, stating that much disappointment has already resulted. In regard to the 120 cases which had come under his observation, the patients could not compare with those treated in the army either in physique, general hygiene, discipline, or in the opportunity for observing later effects; but experience showed that salvarsan was capable of checking most of the ravages of the disease, though lapse of time, at least three years, would be necessary before declaring a cure established. Infectivity would also in all probability be greatly diminished. It should not be forgotten that almost equally remarkable results followed the administration of mercury by intramuscular injection and inunction, which he still regarded as the mainstay in treatment. The demonstration of spirochætæ in the first stage was of the greatest importance in many instances that were formerly doubtful, and their discovery enabled vigorous treatment to be undertaken at a time which promised the greatest chance of success. He recommended the employment of 0·6 to 0·4 gramme of salvarsan, repeated in 14 days, though the primary lesion often cleared up after the first injection. He counselled the continuance of mercurial treatment thereafter for three years with intermissions. These injections involved some inconvenience, since the patient had to remain in bed at least 24 hours under close and skilled observation, as the reaction was sometimes severe and even alarming. It could not be foreseen in any individual, and might depend on arsenic intolerance. There was sometimes difficulty in reaching a vein, especially in women, as had been previously experienced in 1896 when intravenous injection of mercury was introduced. If the vein were missed serious and painful œdema and phlebitis resulted. Some fatalities had occurred, probably more than were generally known. He had had two such experiences in hospital, doubtless connected with the severity of the disease, but accelerated by the arsenic, and two others had recently come to his knowledge. Faults in technique resulting in admission of air or clotting also occurred, so the treatment was not without risk and discomfort. If undertaken by one thoroughly skilled, and followed by the administration of mercury, the treatment appeared ideal.

Captain L. W. HARRISON, R.A.M.C., said it was only natural in speaking of salvarsan to compare its effects with those of mercury in regard to safety of administration, rapidity of action, and permanency of results. In the majority of cases two years' persistent treatment by mercury was probably efficacious, but it made great demands on patience, and relapses and complications could scarcely be avoided. The dose needed nice adjustment, and intermissions of treatment might be necessary. His experience in the use of salvarsan at Rochester Row Hospital extended over 11 months, and the cases could be divided into (1) early primary cases, and (2) cases which had proved refractory to mercury. He presented tables showing every case treated, a complete account of relapses, those showing very striking results, and those in which the effects were not so pronounced. The first table of fresh cases treated initially by salvarsan showed a much more rapid decline of symptoms than was produced by mercury, whether tested by clinical appearances, bacteriology, or the Wassermann reaction. The second table, made up from cases refractory to mercury throughout the army, showed very striking effects of salvarsan, the symptoms commonly disappearing by the third or fourth day. His general conclusion was that a rapid cure was effected in both these classes of case, though it was yet too early to give an opinion as to ultimate and complete cure. Among 115 cases 18 relapses had been encountered. When a second injection had been given for recurrence of symptoms its effects were as strikingly beneficial as in the first. The subsequent instances showing a positive Wassermann reaction were more numerous than those of recurring symptoms, and he held it unwise as yet to draw conclusions as to permanence of cure. In regard to mode of administration, he preferred infusion to injection. A large-bore needle was not necessary. If the saline solution were freshly made reaction was milder, possibly owing to entire absence of micro-organisms.

Mr. J. E. R. MCDONAGH (London) attributed most of the ill-effects which had been recorded as following the administration of salvarsan to the influence of the spirochætæ themselves, particularly in the nervous system. Accidents also resulted from errors in technique and probably also in connexion with an arsenic idiosyncrasy which could not be

anticipated. Optic neuritis and affection of the cochlear nerve occurred in the second stage as part of the original disease, and indicated rather that the treatment had been inadequate. He considered neither of these nerve conditions a contra-indication to the use of salvarsan. After administration there was a rise of blood pressure, succeeded by a fall, attributable to the alkaline solution. This was important in connexion with diseased conditions of the heart and large vessels. Preparation of the patient should be in all respects the same as for other operations, especially as regards preliminary rest, relative starvation, and clearing of the bowels. When vital parts were involved in the disease the local reaction might have very serious effects, such as meningitis or hæmorrhage in various directions. The solution employed should be neutral in reaction and the dose 0·6 gramme salvarsan in 10-ounce saline solution. He advised treating cases in the earliest stage, repeating the injection in 14 days and continuing with intramuscular injections of mercury, many recurrences being due to auto-infection.

Dr. R. SCHUSTER (Aachen) contended that the Wassermann reaction was reliable either in the latent or active stage of syphilis. In latent and parasyphilitic conditions salvarsan was quicker and also more dangerous in its effects. He referred to cases of locomotor ataxia in Westphalia which had died suddenly from respiratory paralysis and hæmorrhage in the medulla oblongata. Ordinary treatment commonly failed because it was not persisted in till the cure was completed.

Dr. R. STOPFORD TAYLOR (Liverpool) reported a series of cases treated by salvarsan. General paralysis had not been benefited, but a bad case of locomotor ataxia had been able to walk after 48 hours. The arsenic was rapidly eliminated when given intravenously, and could not be found in the urine after 9 to 10 days. After intramuscular injection, however, it could be detected after several weeks. Disappearance of pain was very striking, as was also improvement in the general health and increase in weight.

Dr. OTTO F. F. GRÜNBAUM (London) said that in tabes dorsalis it was too much to expect formation of new tissue, but arrest of the disease and cessation of pain might be secured. Freshly prepared saline solution and a minimum alkalinity were important. A slight addition of acid could be made without causing a precipitate. A small needle could be used provided it could be kept free of clot. If the vein was small, freezing to the skin made transfixion easier. A second injection could be safely undertaken after 48 hours.

Dr. G. PERNET (London), Dr. G. H. LANCASHIRE (Manchester), and Dr. J. C. MCWALTER (Dublin) also spoke before Mr. LANE and Captain HARRISON replied.

TROPICAL MEDICINE.

THURSDAY, JULY 27TH.

President, Sir FRANCIS LOVELL, K.C.M.G. (London).

At the opening of the sitting Dr. A. W. G. BAGSHAWE, director of the London Sleeping Sickness Bureau, made an important announcement regarding

The Most Recent Advance Reported as to Experimental Inoculation of Sleeping Sickness.

He said that Professor F. Kleine, of the German Sleeping Sickness Commission, who had been the first to prove that Trypanosoma gambiense underwent a cycle of development in the body of the Glossina palpalis, and who had been continuing his research work in Africa, but who was at present home on leave in Germany, had sent him a communication in which he said that he had received information by telegram from Dr. M. Taute in the Tanganyika district to the effect that the experiments with the object of transmitting sleeping sickness by the agency of Glossina morsitans had proved successful. Of 16 monkeys experimented upon, six had become infected, the disease having been unquestionably conveyed by G. morsitans. This, said Dr. Bagshawe, was an important discovery, for hitherto they had regarded G. palpalis as the sole agent by which sleeping sickness could be transmitted. That under certain circumstances G. morsitans also could convey the infection served to explain some recent puzzling cases of sleeping sickness which had occurred in Rhodesia and Nyasaland, in districts where, though carefully sought for, no trace of G. palpalis could be found, and where, consequently, the origin of the cases could not be accounted for. They would, however, have to wait for full details of these experiments until the issue in due course of the printed report of the German Commissioners.

Dr. J. W. W. STEPHENS (director of the Incorporated School of Tropical Medicine, Liverpool) then opened a discussion on

Yellow Fever on the West Coast of Africa.

He explained that the duty of opening the discussion had devolved upon him in consequence of the unexpected death of Sir Rubert Boyce, who had already with great vigour and ability dealt with the question. For himself he wished to say that he desired to approach this difficult subject more as a critic of the evidence brought forward in favour of the alleged endemicity of yellow fever on the West Coast of Africa than as a partisan of one side or the other. So far as he could make out, no one denied that the disease did appear now and again in that region. On the one hand, there were those who contended that these cases were due to an imported infection, possibly from South America or the West Indies, brought on board ships; while others maintained that the cases arose from the locality itself where the native acted as a reservoir of the virus. Some persons alleged that the evidence as to transmission of yellow fever by the stegomyia fasciata was not definite or precise, and some suggested that the parasite might be different from that of South America. It had, however, to be admitted that stegomyia abounded in the towns on the West Coast of Africa, but notwithstanding this fact there had not been any recent epidemics of the disease on a large scale in any of these towns. Was this cessation of epidemics to be explained by native insusceptibility, or had the natives acquired immunity by previous mild attacks? It was maintained by some that natives had a natural resistance to yellow fever infection. Such examples of this natural resistance had been met with—e.g., among large bodies of troops in the Mexican war—some corps entirely escaping, while others suffered severely, both parties apparently being subjected to the same opportunities for contracting the infection. With regard to the alleged natural resistance of negroes to yellow fever, in the American war with Cuba it was found that the black troops suffered equally with the Americans. If yellow fever be not imported in each instance into the West African towns, the disease must be endemic, the native acting as the reservoir of the virus. This was the late Sir Rubert Boyce's view. Recent text-books make the statement that yellow fever is endemic in West Africa, and Dr. Stephens said he was not prepared to dissent from that statement. He thought it impossible to believe that the disease could be so frequently imported. Endemicity of yellow fever implied that the infection spread to some extent among the natives, and that this infection resulted in subsequent immunity. It was obvious that more careful investigation on the spot was necessary, and they had therefore to be cautious in drawing too hasty conclusions. Mere assertion on the one hand or a simple denial on the other was useless. Sir Rubert Boyce also believed the bilious remittent fever of West Africa was yellow fever. But the difficulty was in proving the diagnosis, no specific organism of yellow fever having as yet been identified. A practical point in the prevention of yellow fever, if it existed endemically in West Africa, was to secure, in addition to anti-mosquito measures, sufficient isolation of the housing of the European from that of the native community. Further investigation was needed to settle in a satisfactory way whether (1) yellow fever was imported or endemic in West Africa; (2) had the native natural or acquired immunity, and was this the reason the disease did not spread? It was also very important to learn definitely whether bilious remittent fever was being mistaken for yellow fever. Inquiry was necessary before a settlement of the disputed points could be reached.

Dr. W. T. PROUT, C.M.G (Liverpool), reminded the Section that the subject had already been discussed and fully thrashed out at recent meetings of the Society of Tropical Medicine in London, with the assistance of the late Sir Rubert Boyce, and so far as he could see no new facts had been adduced since then. What was needed, he thought, to help to a right decision was the production of more definite facts as to the actual conditions under which alleged yellow fever cases were met with in West Africa. Without doubt cases of true yellow fever occurred now and again on the Coast, but that the disease was always happening not only in a few places but up and down the country, as contended by the late Sir Rubert Boyce, there was no proof at all.

The constitution of the West Coast town population was usually a small isolated community of Europeans and a large community of natives, the Europeans being constantly recruited by non-immunes from home. It was alleged that the native population had acquired immunity, but certain of the West Coast towns had an annual large influx of natives brought from the interior, presumably having no acquired immunity. If the disease were endemic there was material both among Europeans and natives in which it could spread and give rise to an epidemic. Dr. Prout quoted some of his own personal experiences gained while serving in West Africa, and contrasted yellow fever and malaria in their modes of spread. He contended that though occasional cases of yellow fever occurred in that region they were not by any means so common as the late Sir Rubert Boyce asserted. Dr. Prout was not convinced that the disease existed commonly in a mild form among the natives of West Africa, thus conferring subsequent immunity upon them. But he wished to keep an open mind, and would carefully consider any trustworthy evidence on the subject if it were submitted to him.

Dr. H. SEIDELN (Liverpool, formerly professor of pathology and bacteriology in the University of Merida, Mexico), pointed out that the views put forward by Sir Rubert Boyce were not new, but it had required some courage to bring them up in the face of official disapproval. The conditions of the districts on the West Coast of Africa did not, in his opinion, differ from those found in other centres, as, for example, in South and Central America, where yellow fever was endemic. From what he had heard he believed that in West Africa only severe cases of yellow fever were reported as such, and this did not give a true idea of the extent of the prevalence. Dr. Seideln gave some interesting details of an illness from which he and his family suffered within a month of their arrival in the Mexican province of Yucatan, but which was not at the time diagnosed as yellow fever. From facts which came to his knowledge afterwards he regarded the illness as true yellow fever. As he was exposed subsequently to various opportunities for contracting the disease and escaped, he inferred that the illness in question had conferred immunity upon himself and family. It was significant that the local health officials offered to give him a certificate that he was immune to yellow fever, so that he could travel without any restriction in South and Central America. He believed that the number of stegomyia in West Africa was not large enough to allow of the development of epidemics of yellow fever. Investigation was greatly needed to settle the amount and distribution of the stegomyia fasciata in West Africa, and whether after all this was the transmitter of the yellow fever infection in that region. It was possible that some other insect acted as a carrier of the disease. He disputed the statement that the blood of a yellow fever patient ceased to be infective after three days in all cases, for he had himself met with cases which were infective at a later stage than this. Extremely careful and exact observations were required to settle the question. The biology of the stegomyia should also be investigated, and the clinical diagnosis of yellow fever should be fully worked out. Dr. Seideln said that he had done some research work on yellow fever which he proposed shortly to publish.

Dr. A. J. CHALMERS (Colombo) continued the discussion, mentioning his personal experiences while stationed in West Africa. As regards bilious remittent fever, there were some cases in which examination of the blood revealed evidence of malarial parasites, but in others with similar symptoms no such evidence was forthcoming. He was unable to say that the latter were instances of yellow fever. He was disposed, however, to believe that yellow fever was endemic in West Africa.

Major R. W. H. JACKSON, R.A.M.C. (Plymouth), referred to the outbreak of yellow fever during the Ashanti war in 1872 and his personal experiences in West Africa and the West Indies. He regarded the quarantine regulations in the West Indies as very effective, but it was very necessary that the diagnosis of yellow fever should be beyond dispute before they were applied.

Dr. R. H. KENNAN (Dublin) also related some personal experiences while stationed on the West Coast of Africa. Cases he did not diagnose as yellow fever at the time now appeared to him to have been instances of yellow fever. He thought that the disease went in cycles, appearing epidemically in some part of the coast every eight years.

Dr. J. W. MARTIN (Dumfries) doubted that yellow fever was always present in West Africa. He admitted the difficulties of diagnosis, especially in mild or anomalous cases. Until some method for establishing the diagnosis of the disease was found, he feared we must remain in doubt as to the alleged frequency of yellow fever in West Africa.

Professor W. J. R. SIMPSON (London) believed that while yellow fever did occur on the West African coast from time to time, it was by no means so frequent as was asserted. Natural immunity was an interesting point. He mentioned an outbreak comprising 46 cases—viz., 27 Europeans, of whom 23 died; 13 natives, of whom 7 died, and 6 Syrians, of whom all died. This outbreak showed that natives were attacked, and that a proportion died from the disease. One might naturally expect that with the large number of Europeans constantly going to West Africa yellow fever, if widely endemic, would attack these non-immunes far more frequently than was actually the case. He thought further investigation on the spot was called for.

Dr. H. P. COLE (Alabama) said that, as one of the officers of the United States Public Health and Marine Hospital Service, he, as well as his colleagues, was always on the look-out for endemic cases of yellow fever among the coloured population, but he had seen none as yet. Bilious remittent fever was not regarded by the Americans as yellow fever.

Dr. M. CAMERON BLAIR (North Nigeria), Dr. G. ROME HALL (London), and Dr. K. S. WISE (British Guiana) also took part in the discussion.

After the PRESIDENT had expressed his opinion that the so-called bilious remittent fever in Sierra Leone, where he had at one time served, was in reality yellow fever,

Dr. STEPHENS replied. He said he was surprised to find that, after all, a majority of the Section regarded yellow fever as endemic in West Africa, but no one had thrown light on the reason why if endemic it did not spread oftener and cause epidemics. He did not commit himself to the opinion that bilious remittent fever was yellow fever, but he thought that a case for inquiry had been made out. The difficulties of the diagnosis were the crux of the whole matter, and no advance could be made until some trustworthy pathological test for yellow fever had been discovered.

Dr. H. BAYON (Craggs Investigator, London School of Tropical Medicine) then read a paper on the

Culture of the Leprosy Bacillus.

He said that Hansen's bacillus was generally regarded as the cause of leprosy, but it was possible that it was merely a harmless accompaniment of the real organism. He referred to the recently published work of Captain T. S. Beauchamp Williams, I.M.S., who had cultivated two types of organism from his cases—(*a*) a diphtheroid non-acid-fast organism, and (*b*) an acid-fast streptothrix. Dr. Bayon then described a number of carefully planned laboratory experiments which he had carried out on animals. His investigations were made partly at the Lister Institute and partly at the London School of Tropical Medicine. His conclusions are summed up by him as follows: 1. It is not sufficient to culture an acid-fast or other organism from one or several cases of human leprosy to enable the statement to be made as to its relation to the disease. This must be the result of complete animal experiments and extensive serological tests. 2. It is possible to culture from cases of human leprosy an acid-resisting diphtheroid which acquires acid-fast properties on being injected into rats or mice. It is possible to regain the germ by cultures from the animals experimented upon as an acid-fast rod. Re-injected into rats or mice it causes the identical changes of spontaneous rat-leprosy and very striking analogous lesions similar to those found in the glands and organs in human leprosy. 3. No special medium can guarantee a culture from a case of leprosy. The growth depends on circumstances which we do not so far exactly know and cannot control. This applies to the lepra bacillus in its acid-fast form. The most favourable media appear to be placental extract-agar and horse serum nutrose-agar, with the addition of 2 per cent. of ground-up smegma bacilli. 4. Agglutination, precipitation, complement deviation, and percutaneous tests can be used to prove the relationship of acid-fast or other germs cultured from cases of leprosy. 5. Serological tests and histological changes taken together seem to prove that rat and human leprosy are caused by the

same germ. It is therefore possible that the disease can be transmitted from rat to man, given an appropriate carrier. As rat-leprosy seems endemic to a slight extent in England this may be an explanation of the cases of leprosy where infection has occurred without the patient ever having been abroad. 6 Nodular and anæsthetic leprosy may very well be due to different modes of infection. 7. Kedrowsky's work on the variable morphology of the lepra bacillus appears to be confirmed by these experiments.

Owing to the lateness of the hour at which Dr. Bayon's paper was read there was no opportunity for discussion, but a demonstration of his microscopical preparations was given by him to those interested in the subject after the sitting had terminated.

THE ANNUAL EXHIBITION.

(*Concluded from p. 389.*)

III.—FOODS AND FOOD PRODUCTS.

THE special foods were worth studying, foods for the diabetic and milk foods being most in evidence. In this section it was apparent again that manufacturers are devoting real scientific attention to the composition of foods with the view of adapting them to special requirements.

Albulactin produced considerable interest at the stall of Messrs. A. Wulfing and Co., of 12, Chenies-street, London, W.C. As we have already pointed out in our analytical columns, this substance represents the true milk albumin, the protein which predominates in human milk. Its addition to diluted and sweetened cow's milk is, as practice has shown, of great advantage in infant feeding. Messrs. A. Wander, Limited, of 1 and 3, Leonard-street, London, E.C., exhibited specimens of "ovaltine," which, as our analysis has shown, presents the elements of a complete food, containing in addition the ovo-lecithin of eggs. It is made with malt extract, milk, eggs, and a cocoa flavouring, and occurs in the form of a granular powder soluble in warm milk or water. Messrs. Southall Brothers and Barclay, Limited, of Lower Priory, Dalton-street, and Dale End, Birmingham, showed in addition to a series of chemical and pharmaceutical preparations a milk food reinforced with glycerophosphates of calcium, magnesium, and sodium known as "vitafer." Mr. Richard Maurice, of Bedford Chambers, Covent-garden, London, W.C., represented Messrs. Brusson Jeune, the makers of the diabetic bread known by their name. It is not claimed that this bread is free from starch—and our analysis has shown that starch is present—but it has been considerably reduced, the amount of protein being proportionately increased. The protein amounts to nearly 40 per cent., while the carbohydrates amount to 50 per cent. An excellent assortment of foods for diabetic and plethoric patients was shown by Messrs. G. Van Abbott and Sons, of Baden-place, Crosby-row, Southwark, S.E. These included gluten bread (starch free), gluten flour, semola, and biscottes. Besides there were table jellies, almond biscuits, bran biscuits, and so on. To emphasise the merits of barley water was the chief object of Messrs. Keen, Robinson, and Co.'s exhibit, of Denmark-street, St. George's-in-the-East, London, E., who showed specimens of Robinson's patent barley and patent groats. In addition there were shown at this stall examples of Colman's medical mustard bran, concentrated mustard oil, and Colman's sinapisms. Messrs. Callard and Co., of 74, Regent-street, are well known for their endeavours to make the diet of the diabetic an agreeable and a scientific one. They showed starchless and sugarless breads, biscuits, cakes, rusks, and sugarless marmalade, jams and jellies, fruits, chocolate, and milk. Messrs. J. Reynolds and Co., Limited, of Albert Flour Mills, Gloucester, showed some admirable specimens of wheatmeal bread, and also various grades of wheats, the whole exhibit affording an excellent object-lesson as to the valuable constituents in flour which should not be eliminated. There was a large selection of active digestive ferments on the stall of Messrs. Armour and Co., of Atlantic House, Holborn-viaduct, London, E.C., besides a series of special foods. Their essence of pepsin, elixir of enzymes, glycerine extract of red bone-marrow, glyco-lecithin, and vigoral, a highly concentrated beef preparation, deserve special mention. Messrs. Savory and Moore, Limited, of 143, New Bond-street, exhibited a number of foods which have enjoyed a well-deserved reputation. Amongst these were peptonised milk preparations, coffee and chocolate, and a useful malted food. Their "new chemical food," or fructole of red bone-marrow and glycerophosphates, is giving excellent results in defective nutrition, anæmia, and so forth. Messrs. Brand and Co., Limited, of Mayfair Works, 74 to 84, South Lambeth-road, Vauxhall, London, S.W., showed their well-known "essences" of beef, mutton, veal, and chicken, which are now put up in glass. There were besides a number of special foods for the invalid, which, apart from nutrient merit, appeal to an indifferent palate. Cerebos salt (Cerebos, Limited, of 3, Maiden-lane, London, E.C.), the pioneer of dry powdery salt which does not cake, exhibited their speciality, while not far away was the stall of Virol, Limited, of 152-166, Old-street, London, E.C., where specimens of virol were shown. There is now abundant practical evidence in favour of the value of this complete food in wasting diseases. It contains marrow fat emulsified with carbohydrates (active malt extract), including red marrow, and phosphates are plentiful. Its special nutritive value has received considerable testimony. An interesting selection of food products and adjuvants was shown by Messrs. Fairchild Brothers and Foster, of 64-65, Holborn-viaduct, London, E.C. There were panopepton containing peptonised lean beef and wheat flour, pepsencia containing the active digestive principles of the gastric juice, lecithin in the forms of elixir and glycerole, the "nerve food," and a number of carefully prepared digestive products known as "pepules."

The food exhibits were of a special rather than of a general kind, and showed in many directions advances on previous attainments.

IV.—SANITARY APPLIANCES.

The exhibition here was small. There was a curious falling off in the number of disinfectant preparations shown. The Jeyes' Sanitary Compounds Company, Limited, of 64, Cannon-street, London, E.C., were represented in a comprehensive series of disinfectant preparations the basis of which is cyllin, an effective bactericide, while it is much less toxic than carbolic acid. A profusion of antiseptic preparations with different active agents to do the work of disinfection was exhibited by the Sanitas Company, Limited, of Locksley-street, Limehouse, London, E. Peroxide of hydrogen, formaldehyde, phenolic fluids (sanitas-bactox, a clear fluid forming a white soapy emulsion with water, and sanitas-sypol, a clear soapy fluid which forms a clear mixture with water), sanitas (oxygenised turpentine) sulphur candles, and so forth, made up a stall crowded with sanitary appliances. Messrs. Slack and Brownlow, of Abbey Hey, Gorton, Manchester, showed several models of their simple and effective germ-proof filter made for high and low pressure. There were also shown a hospital filter made for dealing with hot and cold water for use in the operating theatre, and a "sanitary bulb" for automatically diffusing disinfectant into the water of the flushing tank. Close by were specimens of flooring polished with the sanitary paste, ronuk, of Ronuk, Limited, of 16, South Molton-street, London, W. Ronuk is obviously an application which conduces to a sanitary environment. It is used on hospital floors with marked success.

V.—MINERAL WATERS, BEVERAGES, ETC.

A feature of this section in previous years has been the demonstration by photographs, literature, &c., of the merits of certain of our leading watering places. There were but a few represented on this occasion. The brine baths of Droitwich, which enjoy a deserved reputation in the treatment of rheumatic affections, found illustration at one stall, and stress was laid upon the advantages which this place offers to those who seek a nerve- and rest-cure. Buxton was also represented in a series of photographs which sufficed to show how alive to the modern requirements of a spa the authorities at this health station are. The exhibit was under the direction of Mr. F. J. C. Broome, the manager. The Apollinaris Company, Limited, of 4, Stratford-place, Oxford-street, London, W., exhibited samples of their well-known natural bitter saline purgative water, Apenta, the action of which is due chiefly to the sulphates of magnesia and soda present, but carbonate of sodium is an important constituent, giving the water a soothing effect upon the lining of the stomach and bowel. There were also examples of Apollinaris, a really alkaline table water and antacid; and Johannis water, with and without lithia. Messrs. Ingram and Royle, of 45, Belvedere-road, London, S.E., had a quite exhaustive series of mineral waters on their stall. There were the Carlsbad waters, Carlsbad sprudel salt (evaporated from the spring itself),

Vichy water, Contrexéville, Friedrichshall (saline aperient), Giesshübler (a clean alkaline table water), and Hunyadi Janos (a bitter purgative saline water from the famous springs near Budapest). Friedrichshall water was also represented at the exhibit of Messrs. C. Oppel and Co., of 10 and 12, Milton-street, London, E.C. In addition to the sulphates of magnesium and sodium it contains relatively large amounts of the chlorides of sodium and magnesium, which render the water alterative and an aid in metabolism.

VI.—PUBLICATIONS.

There was an interesting collection of modern medical works to be found on the stalls of several well-known publishers. Amongst the publishers represented were: Messrs. Iliffe and Sons, Limited, of London and Coventry, the proprietors of *The Autocar*, which provides information and advice to medical men in regard to the use of motor-cars; the Oxford Medical Publications (Henry Frowde); Messrs. Macmillan and Co.; Messrs. Rebman, Limited; Mr. E. A. Brooke Williams; Mr. H. K. Lewis; Messrs. John Wright and Sons, Limited; the W. B. Saunders Company; and Messrs. J. and A. Churchill.

VII.—MISCELLANEOUS.

Amongst the miscellaneous exhibits worth recording was the gas-heating apparatus of Messrs. John Wright and Co., of 19 and 21, Queen Victoria-street, London, E.C., who showed the "Eureka" gas fire fitted with a patent thermo fire-front with a big radiating surface, and a gas-heated boiler in which the consumption of gas is controlled by an automatic valve which enables the water to be heated and kept hot with a small amount of gas. The underclothing material known as "Aertex cellular," shown by the Cellular Clothing Company, of 72 and 73, Fore-street, London, E.C., also made an interesting exhibit. The material is comfortable and light whilst sufficiently protective to the body. A specially dyed red Aertex fabric was shown for tropical use, the view being that such a material cuts off the greater part, at all events, of the actinic rays of the sun.

BRITISH PHARMACEUTICAL CONFERENCE.

THE PRACTICE SECTION.

THE newly constituted Practice Section of the British Pharmaceutical Conference has held its first meeting at Portsmouth in connexion with the Conference whose proceedings we briefly noted the week before last. Until this year the Conference has devoted itself almost entirely to scientific matters, but a large number of members having expressed the desire that the scope of the work should be enlarged so as to embrace subjects of more general pharmaceutical interest, the rules of the Conference were altered to permit of the inauguration of the new section. Accordingly, in addition to the papers read in the Science Section, abstracts of which have already appeared in THE LANCET,[1] subjects of a non-technical character were discussed at the forty-eighth annual meeting.

Mr. J. C. UMNEY presided, and the first subject considered was that of Secret and Proprietary Medicines. Recently the Conference caused an inquiry to be made among over a hundred local pharmaceutical associations in the United Kingdom with the object of ascertaining the views of pharmacists regarding the sale of these articles. The result of this inquiry was announced by Mr. E. S. PECK, one of the honorary secretaries of the Conference. It appears that the sale of proprietary remedies is considerable in all districts, and, according to replies received, proprietary remedies are ordered by medical practitioners in many localities. Replies to the various questions were received from 103 associations. To the question, "Are the proprietary articles which are ordered by prescriptions, usually single substances made up by a patent process, or under a protected name—e.g., veronal, stovaine, &c.—or mixtures which any competent pharmacist might be supposed to be able to prepare if the formula were known"? the replies were: Single substances, 6 per cent.; mixtures, 6 per cent.; both single substances and mixtures, 84 per cent.; neutral, 4 per cent. The replies to other questions indicate that the majority of pharmacists would welcome legislation requiring manufacturers to declare the principal ingredients of proprietary remedies, and that a large body of opinion is in favour of joint action being taken by medical and pharmaceutical bodies to bring about a more satisfactory state of affairs. The result of this inquiry having been explained, a discussion was opened by Mr. E. F. HARRISON. Describing various kinds of proprietary remedies, some good and some very bad, he said a strong case could be made out for certain classes of remedies, as, for instance, such as are not of secret composition; if a man by his special experience discovered some new way of combining certain medicines of known value so that their efficiency is increased he was entitled to profit by his special knowledge. He expressed the opinion that legislation should be introduced to make it impossible for fraudulent quack medicines to be sold, and suggested that it would be enough to require the declaration on the label of the names of all the principal ingredients and the exact quantities of any coming within the poison schedule or possessing great activity. He thought the proprietor might be allowed to keep to himself the nature of subsidiary ingredients used, for example, as emulsifying or flavouring agents, and the exact proportions in which the different constituents were combined. For several reasons he thought any legislation on this subject should be preceded by a thorough public inquiry. The discussion was continued by a number of speakers. Mr. J. C. UMNEY, who is chairman of the Proprietary Articles Section of the London Chamber of Commerce and chairman of the Proprietary Articles Trade Association, said that so far as he could find out the bulk of the proprietors of proprietary medicines would be willing to give a certificate of a negative character stating that their preparations do not contain noxious ingredients. Mr. R. A. ROBINSON, an ex-president of the Pharmaceutical Society and a former chairman of the London County Council, considered the retailing of articles for which extravagant claims were made was an illegitimate form of pharmacy. The SECRETARY of the National Food Reform Association expressed the hope that before long the Government would find time to take up the question. On the motion of Mr. HARRISON, seconded by Mr. WIPPELL GADD, a proposition was carried unanimously, calling upon the Government to institute a public inquiry into the advertising and sale of proprietary secret remedies and the law relating thereto with a view to further legislation for the prevention of fraud and quackery.

In the same Section a paper was read by Dr. F. BEDDOW, Vice-Principal of the Portsmouth Technical College, on the Education of the Pharmacist from the Point of View of the Teacher. In his view the present system of educating the pharmacist is by no means an ideal one, and he hoped that when changes were introduced the education of the student would be considered as the important thing and the examination as of secondary importance, and that regulations would be made ensuring that successful candidates shall have received such education as can be obtained without excessive cost to themselves. He hoped the present system of testing candidates by oral and practical examination would be retained and that the written examination and the production of notebooks would be looked upon as an additional help in deciding the candidate's qualification. A discussion followed the reading of the paper.

The National Insurance Bill was then considered and a resolution was carried expressing approval of certain recommendations passed at a special meeting of the Joint Standing Committee of the British Medical Association and the British Pharmaceutical Conference. These recommendations, which were not all confirmed by the British Medical Association, were to the following effect: (1) That the principle be affirmed that the dispensing under the proposed scheme be done through the channels provided by the Pharmacy Acts, and that provision should be made in the Bill for the carrying out of the Chancellor's expressed intention that this work should be done by pharmacists; (2) that insured persons should be allowed free choice of pharmacists; and (3) that provision should be made for exclusion from medical and maternity benefits of persons whose average income from all sources exceeds £2 a week. The principles of the first two of these recommendations were embodied in Clause 14 of the National Insurance Bill during the Committee stage in the House of Commons last week.

At the concluding session of the Conference on July 27th Sir Edward Evans was elected President for 1911–12, and an invitation to hold the next annual meeting in Edinburgh was accepted.

[1] THE LANCET, July 29th, 1911, p. 319.

THE LANCET.

LONDON: SATURDAY, AUGUST 12, 1911.

The Cholera.

IN another column a valued correspondent deals in a suggestive manner with the present situation of cholera in Europe, while our correspondent in New York draws attention to the apprehensions in the United States. The fears, freely expressed by numerous epidemiologists at the close of last year, that a recrudescence of cholera would be seen in Europe during the present summer, and that the disease would again become epidemic, have unhappily been realised. Cholera already appears to be extending from two chief centres—Italy and Turkey—and is now threatening a number of countries into which the infection has been imported. Our readers will remember that the epidemic which prevailed in Italy last year subsided about January of the present year, the last cases being notified at Taranto in the extreme south of the Italian peninsula. Nothing more was heard of the disease until early in June, when almost simultaneously announcements appeared that cholera was epidemic in certain places which had last year suffered severely from its ravages, including Naples and Palermo, with their adjoining districts. Up to the middle of July upwards of 1400 cases have been officially notified in a period of about five weeks. So far as can be judged by the published figures the virulence of the existing strain of the cholera organism in Italy is not great, the recorded case mortality rate being a little less than 31 per cent. More recently extensions of the infection have occurred in Northern Italy, groups of cases having been reported in the province of Genoa at Spezzia and elsewhere, and at Leghorn on the coast of Tuscany. In some other districts "cholerine" is said to be prevalent, and there is some suggestion that certain outbreaks of so-called "typhoid fever" are in reality manifestations of cholera infection. Naturally some alarm has been created, and one result has been the postponement until next April of the meeting of the International Congress on Tuberculosis, which was to have been held at Rome in September. Correspondents in the continental press allege that the true incidence of cholera in Italy is not recorded in the returns published by the Italian Government, and that the occurrence of outbreaks is being concealed by the authorities in order that foreign visitors may not be frightened away. The statement is also made in the continental papers that as many as 200 cholera cases have occurred in quite a short period at Venice, and a number of others at Rome, without either of these towns appearing in the official list of infected places, and further, that no notification of these cases in Rome and Venice has been made to the European Powers as required by the terms of the Paris Convention. It is asserted that the policy of concealment practised at Naples last year is being repeated at the present time at other infected towns. How much truth there is in these allegations we are not in a position at present to say, but the suggestion is a very serious one and demands immediate attention.

From Italy cholera has been carried into France, a group of cases having occurred at Marseilles, and also into certain districts in Austria, including Trieste, Gratz, and Cattaro in Dalmatia on the eastern shore of the Adriatic, the source in each instance being traced to some Italian infected district. In some cases we hear that the eating of infected oysters or other shellfish by tourists in certain infected localities in Italy had resulted in attacks of cholera. On shipboard the disease has been carried from Naples and Palermo by Italian emigrants to the United States of America, 25 cases having already occurred in connexion with the port of New York and one at Boston. Some of the attacks occurred during the voyage across the Atlantic, others after arrival at the quarantine station when the passengers were undergoing five days' observation, while yet others occurred after the termination of the detention period in quarantine and after the passengers had proceeded to their destinations. These occurrences have given serious cause for alarm to the American port sanitary officers, who say that while it is comparatively an easy task to prevent the entrance into the States of persons ill with cholera, it is far more difficult to deal with cholera bacilli carriers who are themselves on arrival apparently in good health. On the advice of its medical experts the Government of the United States has issued a fresh order to the national, State and local quarantine officers, collectors of customs, shipowners, and agents, and to all others whom it may concern, that, with a view to diminish the danger from bacilli carriers, steerage passengers from ports or places infected by cholera shall be detained for ten days for observation, unless after five days (the previous period of detention) they are found not to be bacilli carriers. The importation of food by the arriving Italian emigrants was also forbidden. These new measures, however, in less than a fortnight were supplemented by another order, dated July 19th, providing that all steerage passengers arriving at ports in the United States from infected places shall be subjected to a bacteriological examination, and shall not be admitted to entry into the States until it has been determined by this examination that they are not carriers of the cholera bacillus. It is obvious that these new regulations, necessitating as they do bacteriological examination of the fæces of large numbers of persons, will entail a considerable amount of additional work upon the staff of the State and port authorities. In our opinion, it would be very difficult to carry out such systematic examination at English ports. It is not denied that much more care is necessary in America than with us in England to prevent danger arising from the introduction of cholera germs into a country where it is admitted frankly that sanitary circumstances and administration generally are not so satisfactory as with us, and where in some places particularly the public water-supplies have not been sufficiently safeguarded or protected from excremental pollution. These extra precautions now enforced in America may be regarded as the penalty paid for postponing necessary sanitary reforms until danger has actually arisen.

In Turkey, the second centre of diffusion of the cholera infection, the disease has of late been extremely prevalent in

parts of Asia Minor, especially in Smyrna and Samsun and in the districts along the southern shores of the Black Sea. In Constantinople cases have been occurring, sporadically, it is said, but here, as elsewhere in Turkey, the authorities for their own purposes have minimised the outbreak. There is evidence that the infection is spreading in the Turkish provinces; an outbreak is now reported among the soldiers on service in the disturbed districts of Upper Albania. From Turkey cholera has been conveyed into Greece and Bulgaria, and perhaps also into Roumania, but this as yet lacks confirmation. It is somewhat strange that so little has been heard of cholera this year from Russia, where for three years in succession the malady has been widely epidemic and where in 1910 no fewer than 216,000 cases were reported with 101,000 deaths. Scattered groups of cases have, however, been already reported in June or July in the basin of the Volga in the governments of Kazan, Samara, and Astrachan; in Southern Russia at certain Black Sea ports in the governments of Kherson and Ekaterinoslav, and at Baku on the Caspian Sea. There is an entire absence of mention of cholera at St. Petersburg which has usually in past years suffered severely; it is possible that this present immunity may be due to the measures recently taken to "sterilise" the water for the city's public supply taken from the polluted River Neva. It is said that now first of all the water is clarified by the addition of sulphate of aluminium, then sent through rapid filters and afterwards passed to the "sterilising" towers, where it is mixed with ozonised air by means of Otto injectors. In Western Russia a few cases have been notified in the government of Minsk, which is near the borders of Poland, and at least one fatal case has occurred in Vitebsk on a raft coming down the river Dwina (or Düna), which is navigable for upwards of 400 miles of its course, and which flows into the Baltic Sea at Riga. It has generally in former years been the Baltic ports which were regarded as the greatest source of danger from cholera to this country. Up to the time of writing there is no indication of any present danger from that quarter. Should cholera invade the Baltic ports in August or September less danger is to be apprehended than if they had become infected earlier in the year, as there would be less time for the epidemic to develop before the advent of the colder weather, when commonly the infection spontaneously subsides. But in England we place our reliance mainly in the excellence of our sanitation and administration to protect us from the dangers which chance importation of cholera infection might bring to us, as we have pointed out on many previous occasions in these columns.

The National Insurance Bill.

ON Friday in last week the Chancellor of the Exchequer briefly reviewed what had been done in Committee of the House of Commons in respect of the National Insurance Bill, and while he drew attention to points of difficulty ahead, he congratulated the House upon having made very substantial progress. As far as the profession of medicine is concerned—and on every side of this far-reaching measure we find medicine directly or indirectly affected—the clauses of the Bill as amended in Committee, though not escaping criticism, have been received by our readers with satisfaction. Dr. CHRISTOPHER ADDISON'S valuable amendment, by which the administration of medical benefits was transferred to the Local Health Committees, has naturally called forth a protest from the Friendly Societies. The President of the National Conference of Friendly Societies, a body which is said to represent a membership of 6,000,000, with funds of £40,000,000, is quoted in the press as saying that there is considerable dissatisfaction throughout the Kingdom in consequence of the amendment, "whereby a plan which had resulted in an amicable understanding between Friendly Societies and their medical men was taken away." The President of the National Conference of Friendly Societies has been living, it would seem, in a fools' paradise if he really believes that the relations between the medical profession and the Friendly Societies have hitherto been cordial. While we grant now, as we have done often in our columns, that in some instances the medical officer to clubs and medical aid associations has been properly treated, the evidence has always been overwhelming that such cases were the exception and not the rule. Our columns have over and over again described the distressing circumstances which marked contract medical work done under the auspices of medical aid associations, and the wish was unanimous in the medical profession to be free from the control for the future of the Friendly Societies in the matter of the distribution of medical benefits. We have no doubt whatever, as the President of the National Conference of Friendly Societies is reported to have said to a representative of the *Daily Telegraph*, that the societies would have been prepared, if the discretion had been left with them, to increase the allowances made to their medical officers; they must have been only too well aware that no other course was open to them. But the medical profession has felt all along that in the hands of the societies their interests were not safe; in the past the complaints of the medical officers of the societies were too often not attended to; their professional position was not recognised; their efforts to obtain adequate remuneration even met with determined resistance. If those favourable concessions, which we now learn that the Friendly Societies would have been willing to make under the Bill, had been spontaneously offered, or had been granted years ago in response to the numerous protests of their medical officers, the public would be more ready to see the objections which are seen by the Friendly Societies to Clause 13 as now amended. But with full experience of what the relations between Friendly Societies and their medical officers have been in the past we rejoice at the transfer of the distribution of medical benefits to the Local Health Committees.

Clause 14 as amended may on reflection, we think, be considered, as we termed it last week, a medical triumph. We admit to the full the simplicity and advantage of a wage limit, but we have never been able to shut our eyes to the fact that the arguments which would be brought forward against such a proposal in the House of Commons would inevitably prevail. The process of ascertaining whether the wage limit had or had not in any individual instance been exceeded would be difficult and vexatious; employment, though much better than heretofore, and though never so

precarious in the upper grades of labour as in the lower, is still an uncertain thing, and many of the insured persons will hardly know exactly what their average incomes are; lastly, the conditions of employment in different centres, and in town and country, vary so largely that a man making on an average £75 a year in one place may be substantially richer than a man making £104 in another. Of course the agreement of the House of Commons to the clause definitely committed the medical profession to a form of contract practice, but it would seem that a majority of our readers are reconciled to this principle, so long as safeguards can be maintained against any oppressive methods of its application. The position will now be fair or unfair to the medical profession according as the Local Health Committees are able to make adequate arrangements with the medical profession, and Dr. ADDISON'S admirable amendment securing local option in respect of contracts ought to fulfil his expectations as set out in our Parliamentary report. The Local Health Committees are to be appointed with the approval or at the instance of the Insurance Commissioners (one of whom is to be a medical practitioner) by the county councils, the county borough, and the contributors, and upon these bodies the local sanitary authorities and the medical profession will be represented. The county medical officer of health will attend the meetings. In these circumstances it seems to us that our position should be safe. Resistance to the legitimate recognition of those upon whom, after all, depends the whole working activity of the Bill has been sufficiently demonstrated in the House of Commons during the recent discussions in Committee to be small and factious. We have ourselves always believed that the people of this country, a country which has stood in the van of civilisation by reason of its splendid charities and its organised sanitary service, probably desired efficient medical service, and therefore would be willing to grant the necessary facilities for obtaining it. Undoubtedly difficulties may yet arise between the Local Health Committees and the local medical profession, but in our view the present attitude of the public towards the medical profession is a warrant for the belief that in questions of dispute we shall get a fair hearing. The desire of the Local Health Committees will be to ensure the public health of the local communities.

There is still considerable anxiety felt with regard to the position of the voluntary hospitals under the Bill. The belief is general that the out-patient departments will be relieved, but that any benefit that may accrue to the hospitals in this manner will be lost by an increased pressure upon the in-patient department. Hopeful people see in the measure a promise of the introduction of order into the dispensation of medical charity. Less cheerful people fear lest the voluntary subscriptions to hospitals, both of employer and employed, should fall off when compulsory payments to invalidity insurance begin. If the hospitals had been placed in the same position as sanatoriums with regard to sick benefits their pecuniary position would be less anxious, but the control of the Local Health Committees, which would have followed, might have been very difficult to carry into effect. The obvious method of preventing the waste of labour that takes place in the out-patient departments of voluntary hospitals, and at the same time of dealing with the curse of hospital abuse, is to bring the out-patient departments of the hospitals into touch with the work of the general practitioner, the out-patient departments being used mainly in a consultative capacity. Before the vast scheme of the National Insurance Bill was outlined the suggestion made by most who gave heed to a very difficult situation was the development of provident dispensaries, whereby these institutions would become sorting-houses for the out-patient departments. Under this idea, through the machinery of the dispensaries those patients could be ascertained who could not pay adequate fees. The medical officers of the dispensaries would recommend to the hospitals the suitable cases for treatment, and in this way the hospitals would be supplied with the proper scientific cases without having their charity abused, while quite poor patients would obtain the advantages of coöperation in medical treatment. If the Local Health Committees were placed in a position to subsidise the hospitals they would form a direct link between private contract practice and the out-patient departments of the great charities; but we think that in any event the work of these bodies must have an enormous effect in the near future on our national health.

Annotations.

"Ne quid nimis."

THE WEATHER OF JULY.

FOR several years the summers in this country have been both too cold and too wet. The farmer has also sometimes had occasion to deplore the persistent rain and the lack of seasonable heat. This year it is possible that the mischief resulting from the lack of rain has been almost, if not quite, equal to that caused by the gloom and wet of the few summers preceding. The wind direction on which the temperature at all times of the year so much depends was generally favourable for warmth. As a rule, it came from a southerly point of the compass, often from south-east. Reaching this country from the heated continent after such a short sea passage as the English Channel the air was perceptibly warmer than usual on its arrival. If it had come from the westward after a long passage over the relatively cold waters of the Atlantic the sunshine in these islands would hardly have raised its temperature to 90°, except perhaps in East Anglia. In this country great summer heat which is at all permanent is dependent on two principal factors. The barometer must be high, or rather so, and uniform over a wide area, so that the flow of air from whatever quarter may be light; and the sky must be sufficiently denuded of cloud to allow much sunshine. However high the temperature may be it begins to fall soon after the wind becomes really strong—i.e., a steady flow of air at the rate of upwards of 25 miles an hour—and great heat is never maintained for more than a day or so with an overcast sky. The weather of July was dry in all parts of the kingdom, but the duration of the drought was much longer in the south-eastern and southern counties of England than elsewhere. Over a large area in those districts the drought, according to Dr. Mill, the well-known rainfall authority, was the most severe, taking the extremely high temperature into consideration, of which there is any record. Longer droughts have been experienced, but in the present case the 25 rainless days were nearly all abnormally hot, and the humidity of the

atmosphere always very slight. The effect of the drought on the soil was consequently aggravated very considerably. London, at all events the central portion of it, is generally the most torrid spot in the kingdom during a spell of hot summer sunshine, and it was so on the majority of the days of last month. Occasionally, however, the temperature in other parts of south-eastern England was quite as high, notably at Margate. That resort, while it is much cooler than London and its vicinity during bright weather with the wind from some northerly or easterly point of the compass, is, in common with the other resorts facing the North Sea, very hot whenever there is much sunshine accompanied by a gentle flow of air from the south-west or west. London and its suburbs may be taken as representing fairly the average temperature in the home counties and south midlands, and the figures below show the means both of the maximum and minimum reading for the month, and also the mean temperature of the month, with the difference from the average at the various stations in the metropolitan area:—

	Mean maximum.	Mean minimum.	Mean temperature.	Difference from average.
Kew	79°	56°	67·6°	+4·8°
Greenwich ...	81	55	68·3	+4·6
Hampstead ...	77	57	66·7	?
Westminster ...	79	58	68·6	+4·7

It will be seen that in spite of the high mean of the maximum the difference of the mean temperature from the average of the month was not particularly large—less than 5° at all the stations. This is explained by the fact that the minimum temperature of the nights was often very little above the average. Considering the great heat of the afternoons the nights were relatively cool, the thermometer more frequently falling to below 60° than remaining above it. Westminster was, as would be expected, warmer at night than the outlying places, while during the afternoons elevated Hampstead was the coolest spot. The highest reading recorded was 96° on the 22nd, Greenwich and Westminster both having the same degree of heat, while at Hampstead the thermometer touched 92°, and at Kew 89°. At Greenwich there were as many as 18 days with a temperature above 80°, but at Hampstead there were only 9, at Kew 12, and at Westminster 15. It is very seldom that these islands enjoy as much sunshine as countries in the same latitude on the Continent, and it is probably true that it would be beneficial both to the public health and to agriculture if they had more. But last month, at all events, there was enough and to spare. In many parts of southern and eastern England a new record was established, a record which is not likely to be broken for a generation. At several of the resorts the total number of hours was about 380, or at least 12 hours a day, this high figure being recorded in various places between the coast of Kent and Torquay. Along the west coast the figure was more moderate, but as far north as Llandudno there was a mean of nine hours a day. London's allowance was lower than that of the south coast, but was nevertheless a record, and was about three hours a day above the normal. At Kew the figure equalled 336 hours and at Greenwich 334 hours, while at Hampstead it was 329 hours, at Westminster 319 hours, and in the City 300 hours. An average of nearly nine hours a day for the City is extremely high. During July of last year there were only 94 hours and only 102 hours at Westminster, while at Greenwich and Kew the respective figures were 113 and 111 hours. Throughout France and Germany, and also in the Netherlands and at times in Switzerland, the heat was generally greater than in this country, and the drought was also very pronounced. At Paris the mean maximum temperature was as high as 83° and the total number of hours of sunshine 357.

A NEW SIGN OF ACUTE INTESTINAL OBSTRUCTION.

IN the *Journal of the American Medical Association* of June 17th Dr. H. G. Watson has described a new sign of acute intestinal obstruction, or rather a modification of an old sign, which promises to prove useful in early diagnosis. Fæcal vomiting is one of the cardinal signs of intestinal obstruction, but when the practitioner is called to a case there may be no vomiting, or if there has been vomiting the vomit may have been thrown away without its characters having been noted. The following case led Dr. Watson to suggest a new method of ascertaining the condition of the stomach contents. A married woman, aged 45 years, had undergone an abdominal operation for some pelvic inflammation 12 years previously. It was necessary to use a drainage-tube for several weeks. Subsequently she enjoyed perfect health. One Sunday evening, after eating a good dinner, she felt so nauseated and distended with gas that she took two enemas, with good results. But the abdominal pain increased and she began to vomit. At 11 P.M. her medical attendant was called and treated her for acute indigestion. On Monday she was no better, and on Tuesday she was worse. Dr. Watson saw her on Wednesday. She was in good condition; the temperature was 99° F., the respirations were 30, and the pulse was 100. The diagnosis was still acute indigestion. She complained of considerable abdominal pain and her abdomen was so distended that she said she could hardly breathe. She had vomited, but none of the vomit was saved. As far as her medical attendant and nurse knew there had been no fæcal vomiting, and the stomach was thought to be empty. On examination a splashing sound was obtained down to the pubes. Acute dilatation of the stomach was diagnosed. Dr. Watson passed a stomach-tube and to his surprise expressed over two quarts of dark brown fluid with a fæcal odour. On examination the fluid proved to be fæcal. Acute intestinal obstruction was then diagnosed. Laparotomy was performed and the ileum was found strangulated by a small band of adhesions. The intestines were much distended and it was difficult to relieve this condition in consequence of many adhesions due to the previous operation. Recovery rapidly ensued. Dr. Watson suggests that as an aid to diagnosis in acute abdominal disorders the stomach-pump should be passed from hour to hour and the contents carefully examined. If these are of a dark brown colour with a fæcal odour acute intestinal obstruction may be diagnosed. Dr. Watson thinks that by this means early diagnosis would be facilitated.

A VILLAGE SANATORIUM.

WE have received a copy of a brochure by Mr. H. G. Richter, a French architect, entitled "Contribution à l'Étude des Sanatoria Populaires—le Village Sanatorium." The preface has been written by the Countess of Aberdeen. After a brief review of the principal varieties of sanatoriums now in existence, the author sets forth his views as to the most desirable form which such an institution should take. He considers that it should be built as a small village in which the patients should be encouraged to perform suitable labour. He does not consider manual work absolutely necessary, but after reading a description of the method of treatment adopted at the Brompton Hospital Sanatorium at Frimley he considers that the patients would benefit by performing graduated labour of a kind useful to village life. His chief contention is that anything in the way of a hospital, both as regards building and daily life, should be completely eliminated. He advises that the buildings should not be of a permanent character, but so constructed that

they can be destroyed at a period to be settled by consultation between the physician in charge and the architect. He lays stress on the good psychical effect which such an institution would have on the patients; it would prove, he says, that they are not dependent upon hospitals; it would give them confidence that "cure" is likely to follow, and it would restore hope that they need not always be useless individuals. Mr. Richter gives details of the "village" which he has planned. It would accommodate 300 patients, with the necessary medical and administrative staff. From an architectural point of view the proposed plan is to be commended; the difficulty would naturally be with the selection of suitable cases. That certain patients obtain much benefit by sanatorium treatment combined with suitable exercise and manual labour has been definitely proved, but the application of this method necessarily has its limitations. For selected patients Mr. Richter's village would undoubtedly be of great service.

HODGKIN'S DISEASE.

THE nature and pathology of the condition to which the name of Hodgkin's disease is usually applied have always been matters of controversy, and the numerous alternative names which have been given to it, such as lymph-adenoma, *adénie*, pseudoleukæmia, lymphomatosis, malignant lymphoma, and malignant aleukæmic lympho-adenoma, bear witness to this. Recent histological and other observations upon the tissues in this disease have, however, at last served to establish its identity as a separate condition, although the actual exciting agent has so far not been recognised. An interesting and exhaustive monograph upon this disease has recently been published by Dr. Kurt Ziegler[1] of Breslau, which should be of special value, since not only is the literature of the subject most carefully reviewed, but the clinical and pathological features are described in detail upon the basis of personal observation of over 70 cases, 16 being confirmed by necropsy, while in 40 the nature was established by the microscopical examination of a gland excised for this purpose. At different times and by different authors the disease has been regarded as neoplastic in character, as an inflammatory affection, and as a condition allied to leukæmia. Dr. Ziegler maintains that there can no longer be any doubt that Hodgkin's disease is a specific inflammatory granulomatous affection, and that although the exciting cause is as yet undiscovered it is specific. Its special peculiarity is its predilection for the lymphatic tissues at first, which though not absolute is very nearly so, in spite of the fact that its secondary manifestations may be very widespread. It is convenient to recognise two stages in this affection—the first or local stage, and the second or stage of generalisation. An analysis of 120 cases showed that the glands in front of and behind the sternomastoid muscle were first affected in 50 per cent., the supraclavicular glands and those at the angle of the jaw in 6 per cent., the axillary in 10 per cent, the spleen in 9 per cent., the mediastinal and inguinal glands each in 3 per cent., while in 12 per cent. no glands were discoverable on external examination. The first or local stage is very variable in duration and may last weeks, months, or years. When the stage of generalisation is reached, the swelling of the glands becomes widespread. The spleen is enlarged in 65 to 70 per cent. of the cases, and the liver in 60 per cent. Pressure symptoms from the enlarged glands are very common, and cachexia, anæmia, and fever, as a rule, supervene. The blood changes are usually of the character of the secondary anæmias. The number of red corpuscles may only be slightly reduced, or may sink to 1,000,000 per cubic millimetre. The blood platelets are usually increased; the leucocyte count is variable. It may be considerably increased, and there may be a neutrophile leucocytosis. On the other hand, there may be an actual diminution in the number. There is usually a moderate increase in the eosinophiles and in the large mononuclear cells, while the number of lymphocytes is, as a rule, diminished. The duration of the disease in Dr. Ziegler's cases was longer than a year in less than 50 per cent., while in 18 per cent. it was three months or less. He recognises a number of different clinical types—viz., an acute form, localised and general forms, a type with the clinical characters of a mediastinal tumour, a typhoid form, in which the manifestations are very similar to those of enteric fever, a splenomegalic type, and a form with ostitic and periostitic characters somewhat resembling multiple myeloma. Other less clearly differentiated varieties are an intestinal type, Mikulicz's disease with symmetrical swelling of the lacrymal and salivary glands, and a form simulating mycosis fungoides. The histological changes are described as being so characteristic as to confirm their specific origin. The special features consist in the proliferative character of the inflammatory processes and in the formal reactive cellular arrangement of the proliferating tissue elements. There is also, as a rule, very marked eosinophilia of the local inflammatory cell infiltration. The final stage is one of connective tissue induration. Dr. Ziegler differentiates three different types: in the first two there is an increasing disappearance of the lymphatic cellular elements with a simultaneous proliferation of the connective tissue cells. In one form there is marked leucocytic infiltration; in the other it is entirely absent. The third type is characterised by pure lymphatic cell proliferation. These changes are examined in great detail by Dr. Ziegler, who also gives an interesting review of the etiology of the disease, and of the various agents, such as bacteria, spirochætæ, and Much's rods, which have been regarded as possible causal agents. He also discusses the diagnosis, prognosis, and treatment of the disease. He refers to the various methods of giving arsenic, including the injection of atoxyl and salvarsan. Operative and X ray treatment are also considered. A very full bibliography completes a valuable and interesting monograph upon this obscure and puzzling disease.

[1] Die Hodgkinsche Krankheit. Von Dr. Kurt Ziegler, Privat-docent in Breslau. Jena: Gustav Fischer. 1911. Pp. 264. Price 9 marks.

TREATMENT OF LEPROSY IN EGYPT.

THE Census of 1907 made the somewhat alarming discovery that there are more than 6000 lepers in Egypt, which is a number at least double that which has previously been mentioned in official figures. The Public Health Department has not yet devoted much time or study to this question, and there are as yet no laws upon the subject. But we are glad to see in the last annual report of that department that it is suggested that beggars and vagabonds affected with leprosy should be isolated, and that lepers should not be allowed to make or sell cigarettes and certain foods, nor should a leper be permitted to be an indoor servant or cook. With regard to treatment, as we remarked in our issue of June 3rd, chaulmoogra oil, among other remedies, has been tried and found wanting, so far as the cure of the disease is concerned, although it is useful for the alleviation of symptoms. There seems to be a consensus of opinion on this point. Dr. Engel, the German Director of Statistics of the Public Health Department of Egypt, and one of the few people in that country who for years have been interested in leprosy, however, has found chaulmoogra oil the most valuable remedy for leprosy. But as many patients were unable to continue its use he obtained a purified form of the oil, sold under the name of "antiléprol," which is a clear limpid oil, with hardly any smell and

without disagreeable taste, and, moreover, without the secondary ill-effects, such as loss of appetite and indigestion, which chaulmoogra oil so often causes. He praises antiléprol highly, and finds that it is useful in both the nodular and nervous types of the disease. It is best prescribed in progressive doses, from 30 to 60 drops daily after meals in hot milk, and can be given in capsules. Children take half the dose of adults, and smaller amounts have to be given to a few people who seem unable to take it in ordinary doses. During the whole length of treatment, which may have to extend over three or more years, the patients must take care of their digestion, and must avoid salted food, such as fish, cheese, and vegetables. Dr. Engel now reports[1] the result of his treatment of 72 individuals, two-thirds of whom live in Cairo or in the adjacent provinces, and adds to his pamphlet several photographs of Egyptian lepers, some of which show slight amelioration after the use of the drug. His chief object in writing is to persuade the Wakfs Administration, who have sometimes been called the Ecclesiastical Commissioners of Egypt, to build a hospital for lepers where many out-patients can continue to be treated and a certain amount of police inspection might be instituted. In the interest of Egypt we hope that this may be done.

PARALYSIS OF THE LEFT RECURRENT LARYNGEAL NERVE IN MITRAL STENOSIS.

SINCE paralysis of the left recurrent laryngeal nerve was first described by Ortner in 1897 37 cases have been recorded. The notes of those cases in which a necropsy was performed show much difference of opinion as to the cause of the paralysis. In the *American Journal of the Medical Sciences* for May Dr. G. Fetterolf and Dr. G. W. Norris have given the results of a careful investigation made in order to clear up the discrepancies. Their work consisted in an analysis of all the published cases and an examination of sections of hardened thoraces. Observations were not made on soft bodies because the opening of the chest allows so much collapse and the manipulations of dissection cause so much distortion that normal relations are much altered. Ortner reported two cases and ascribed the paralysis to compression of the nerve between the arch of the aorta and the distended left auricle. He found the nerve discoloured, compressed, and ribbon-like. In the following year Herrick recorded a case in which, in addition to a dilated left auricle, there was chronic adhesive pericarditis, the nerve being embedded in a mass of cicatricial tissue as well as compressed by the auricle. In 1901 Krause reported a case. He took exception to Ortner's explanation, and concluded that the paralysis, though associated with dilatation of the left auricle, was indirectly due to hypertrophy of the left ventricle, which by changing the position of the heart as it lay on the diaphragm altered the relation between the pulmonary artery, the aortic arch, and the aortic ligament in such a way as to cause the ligament to drag on the recurrent nerve. In other cases the nerve is described as compressed between a patulous ductus arteriosus and the aortic arch, between the left pulmonary artery and the aorta (the former being pushed up by the dilated auricle), and between the dilated pulmonary artery and the aorta, and finally as pressed upon by enlarged peribronchial and peritracheal glands. As the result of their anatomical studies Dr. Fetterolf and Dr. Norris conclude that the left auricle can expand readily in but one direction—upwards; posteriorly it rests against the aorta and œsophagus; anteriorly it is limited by the right auricle and left ventricle, and below by the right auricle and liver. Should it become dilated it would press upward and backward, thrusting the left pulmonary artery against the aorta, the left pulmonary vein against the left pulmonary artery, and forcing the distal portion of the latter against the aorta. Later the proximal part of the left pulmonary artery would be jammed upward and backward, mainly by the root of the left upper pulmonary vein. The nerve would thus be squeezed between the pulmonary artery and the aortic arch or ligamentum arteriosum. But direct pressure of any portion of a dilated left auricle on the aortic arch is impossible. When the softness of all the structures involved is considered, as well as the fact that the nerve is normally flattened against the aorta, it seems probable that the paralysis is not due to destruction of the nerve by pressure but to neuritis so excited. In the absence of a necropsy reports of cases of recurrent paralysis in mitral stenosis due to auricular pressure should be received with scepticism, for, as stated above, the paralysis may be due to other causes such as the pressure of enlarged glands.

[1] Professor Dr. Engel Bey: Traitement de la Lèpre, Munich, 1910.

THE PRISON COMMISSION OF SCOTLAND.

WE have been informed that one of the Commissioners of the Scottish Prison Commission is about to retire, and we take the opportunity of pointing out how strong the arguments are that, if any vacancy should occur, it should be filled by a medical man. A Grand Committee of the House of Commons, a Departmental Committee of the Home Office, a Royal Commission on Irish Prisons, and a Scottish Departmental Committee on Prisons have all at different times pointed out the value of a medical voice at the deliberations of such a board; and a remarkable expression of opinion in the House of Commons last year proved that, in the opinion of the Legislature, the arguments for the creation of medical Prison Commissioners are very strong. Undoubtedly the presence of a medical commissioner greatly improves the administration of a Prisons Board, and increases the confidence of the public. We went into the whole matter recently when Mr. M. L. Waller, the possessor of only secretarial credentials, replaced Sir Horatio B. Donkin on the English Prison Commission, and the need for a medical member upon these Commissions is greater now than ever since the passing of the Inebriates Act, for example, added to the duties of the bureau. It seems to us that it will be particularly unfortunate if a medical man is not appointed to any vacancy that may occur on the Scottish Prisons Board, for an opportunity will thus be lost of giving effect to an opinion very strongly held by responsible persons. On such boards medical views should be heard at first hand.

WE regret to learn of the death of Dr. Samuel Jones Gee, consulting physician to St. Bartholomew's Hospital, which occurred rather suddenly on August 3rd.

BRITISH MEDICAL BENEVOLENT FUND.

AT the July meeting of the committee grants amounting to £158 were made to 15 cases. As the current account already showed a deficit of £54 it was necessary to draw largely upon the reserves, and the committee looks forward with grave anxiety to the heavy demands which will be made upon the resources of the Fund during the next two or three months. Contributions are greatly needed and may be sent to the honorary treasurer, Dr. Samuel West, 15, Wimpole-street, London, W. Appended is an abstract of the cases relieved:—

Daughter, aged 54, of late L.R.C.P., L.S.A. Is a candidate for a pension from a charity and meanwhile helped by friends. Recently lost a brother who also helped. Relieved three times, £15. Voted £5.

Daughter, aged 31, of late L.R.C.P., L.S.A. Since death of father

14 years ago has supported herself as a general servant, waitress, &c., but has now broken down in health and is at a convalescent home. Asks for a little help for temporary maintenance after leaving the home. Voted £5.

M.R.C.S., aged 83. Has been incapacitated for several years and dependent on a son who is no longer able to help. Voted £5 and recommended to apply for an old-age pension.

Daughter, aged 54, of late M.R.C.S. Receives a home in return for services but cannot do much on account of a long-standing physical infirmity. Relieved three times, £15. Voted £5.

Daughter, aged 67, of late M.R.C.S. Has supported herself for many years by nursing but is no longer fit for work and is endeavouring to obtain a pension from another charity. Relieved twice, £24. Voted £12.

Daughter, aged 42, of late M.R.C.S. Is a trained nurse, but for some few years has suffered from chronic glaucoma and is now quite unable to earn a living. Relieved three times, £25. Voted £10.

Widow, aged 49, of M.R.C.S. Endeavours to support herself by a boarding house and has established a good connexion but has been obliged to incur heavy expenses owing to the illness of three of her children. Relieved once, £10. Voted £10.

Daughter, aged 30, of late M.D. Dub. Unable to support herself on account of continued ill-health and is dependent on her mother whose sole income is £30 a year. Relieved six times, £40. Voted £10.

Daughter, aged 64, of late M.R.C.S., L.R.C.P. No means and unable to maintain herself on account of mental deficiency. Relieved five times, £60. Voted £12.

Widow, aged 50, of M.B., C.M. Edin. Dependent on income of £20 a year and such profits as she can make by taking boarders during the summer. Seven children, three of whom earn nominal salaries. Relieved 12 times, £138. Voted £12.

Widow, aged 63, of L.R.C.P. Lond. Sole means of support a furnished house, which is at present unlet. Children unable to help. Relieved once, £12. Voted £12.

Daughter, aged 59, of late M.R.C.S. Was fairly provided for but lost her capital through the defalcation of a friend. Relieved seven times, £92. Voted £12.

M.R.C.S., aged 72. Practised in London for several years, but now has cataract in both eyes. Relieved once, £18. Voted £18.

Daughter, aged 68, of late M.R.C.S. Used to keep a school, but was obliged to give it up on account of failing health, and is now dependent on a brother who can ill afford to help. Relieved twice, £24. Voted £12.

Widow, aged 60, of L.R.C.P., L.R.C.S. Dub. Did maternity nursing for several years but is now nearly blind. No children. Relieved 17 times, £161. Voted £18.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 77 of the largest English towns 8284 births and 4940 deaths were registered during the week ending August 5th. The revised estimate of the population of these towns in the middle of this year is 16,157,797 persons. The annual rate of mortality in these towns, calculated on this revised estimate, which had been equal to 11·8, 12·1, and 13·6 per 1000 in the three preceding weeks, further rose to 15·9 in the week under notice. During the first five weeks of the current quarter the annual death-rate in these towns averaged 13·1 per 1000, while in London during the same period the mean annual death-rate did not exceed 12·6 per 1000. The recorded annual death-rates in the 77 towns last week ranged from 7·5 in Tottenham and in Northampton, 8·0 in Stockton-on-Tees, 8·2 in Barrow-in-Furness, and 8·7 in Walthamstow, to 21·3 in Middlesbrough, 21·5 in Walsall and in Birmingham, 22·0 in Rhondda, and 23·6 in Aston Manor. The 4940 deaths from all causes in the 77 towns last week exceeded the number recorded in the previous week by no fewer than 730, and included 1340 which were referred to the principal epidemic diseases, against numbers increasing from 268 to 722 in the five preceding weeks. Of these 1340 deaths, no fewer than 1168 resulted from infantile diarrhœa, 57 from whooping-cough, 53 from measles, 40 from diphtheria, 14 from scarlet fever, and 8 from enteric fever, but not one from small-pox. The mean annual death-rate from these epidemic diseases was equal to 4·3 per 1000, against 1·4 and 2·3 in the two preceding weeks. The deaths of infants under two years of age attributed to diarrhœal diseases in the 77 towns, which had increased from 70 to 533 in the five preceding weeks, further rose last week to 1168, and caused the highest annual rates of 7·4 in Bootle, Newport, and Cardiff, 7·5 in Rhondda, 7·9 in Warrington, 8·2 in Wigan, 8·8 in Birmingham, and 9·0 in Aston Manor. The deaths referred to whooping-cough, which had been 43, 52, and 56 in the three preceding weeks, numbered 57 last week; the highest death-rates from this disease were 1·0 in Newcastle-on-Tyne, 1·1 in Wolverhampton, 1·4 in Sunderland, 1·6 in West Hartlepool, and 1·7 in Walsall. The 53 fatal cases of measles were 9 fewer than the number recorded in each of the two preceding weeks, and included 23 in London and its suburban districts, 7 in Manchester, 5 in Liverpool, and 3 in Salford and in Bolton. The deaths attributed to diphtheria last week numbered 40, against 40 and 42 in the two previous weeks, and included 8 in London, and 3 each in Stoke-on-Trent, Liverpool, Blackburn, and Leeds. The 14 fatal cases of scarlet fever showed a further decline upon recent weekly numbers, and included 4 deaths in Stoke-on-Trent, 3 in London, and 2 in Norwich. The 8 deaths from enteric fever were 3 fewer than the number in each of the two previous weeks; 2 deaths were registered in London. The number of scarlet fever patients under treatment in the Metropolitan Asylums and in the London Fever Hospital, which had steadily increased from 982 to 1412 in the 16 preceding weeks, had further increased to 1433 on Saturday last; 191 new cases of this disease were admitted to these hospitals during the week, against 204, 199, and 209 in the three previous weeks. These hospitals also contained at the end of last week 854 cases of diphtheria, 286 of measles, 269 of whooping-cough, and 43 of enteric fever, but not one of small-pox. The 1344 deaths from all causes in London last week showed an increase of 159 upon the number returned in the previous week, and included 91 which were referred to diseases of the respiratory system, against 113 and 115 in the two previous weeks. The deaths attributed to different forms of violence in the 77 towns, which had declined from 194 to 173 in the three previous weeks, rose to 223 last week, and 412 inquest cases were registered. The causes of 33, or 0·7 per cent., of the deaths registered in the 77 towns during the week under notice were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death during last week were duly certified in Leeds, Bristol, West Ham, Bradford, Hull, Newcastle-on-Tyne, Portsmouth, Salford, and in 53 other smaller towns; the 33 uncertified causes of death in the 77 towns last week included 9 in Birmingham, 5 in Liverpool, 3 in Stoke-on-Trent, and 2 each in Manchester, Sunderland, and South Shields.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns, having an estimated population of 1,710,291 persons in the middle of this year, 866 births and 452 deaths were registered during the week ending August 5th. The annual rate of mortality in these towns, which had been 13·9 and 14·9 per 1000 in the two preceding weeks, declined last week to 13·8. During the first five weeks of the current quarter the annual death-rate in these Scotch towns averaged 14·4, and was 1·3 per 1000 above the mean rate during the same period in the large English towns. The annual death-rates in the eight Scotch towns last week ranged from 7·3 and 8·6 in Perth and in Paisley to 15·4 in Glasgow and 18·7 in Greenock. The 452 deaths from all causes in the eight towns last week showed a decrease of 36 from the number in the previous week, and included 62 which were referred to the principal epidemic diseases, against 63 and 73 in the two previous weeks; of these 62 deaths, 33 resulted from diarrhœa, 11 from measles, 7 from whooping-cough, 6 from diphtheria, 3 from enteric fever, 1 from scarlet fever, and 1 from small-pox. The mean annual death-rate from these epidemic diseases in the eight towns last week was equal to 1·9 per 1000, the mean rate last week from the same diseases in the 77 English towns having been 4·3. The deaths from diarrhœa, which had increased from 14 to 40 in the four preceding weeks, declined to 33 last week, and included 26 of infants under two years of age; 17 deaths occurred in Glasgow, 5 in Leith, 4 in Edinburgh, 3 in Dundee, and 3 in Greenock. The fatal cases of measles, which had been 6, 9, and 4 in the three previous weeks, rose to 11 last week, and included 9 in Glasgow. The deaths attributed to whooping-cough, which had been 17 in each of the two preceding weeks, declined last week to 7; 6 deaths were recorded in Glasgow and 1 in Aberdeen. The three deaths referred to enteric fever were slightly in excess of the numbers returned in recent weeks and were all recorded in Glasgow. The fatal case of scarlet fever was registered in Glasgow and that of small-pox in Dundee. The deaths referred to diseases of the respiratory system in the eight towns, which had been 51 and 48 in the two preceding weeks, declined to 32 in the week under notice, and were 27 below the number in the

corresponding week of last year. Of the 452 deaths from all causes in the eight towns last week, 153, or 34 per cent., were recorded in public institutions, and 31 were attributed to different forms of violence. The causes of 17, or 3·8 per cent., of the deaths in the eight towns last week were not specified or not certified; in the 77 English towns the proportion of uncertified causes of death during the week did not exceed 0·7 per cent.

HEALTH OF IRISH TOWNS.

The annual rate of mortality in Dublin, which had been 19·8 and 22·5 per 1000 in the two preceding weeks, declined to 18·9 during the week ending August 5th. During the first five weeks of the current quarter the death-rate in Dublin averaged 19·2 per 1000, whereas the mean rate during the same period did not exceed 12·6 in London and 15·3 in Edinburgh. The 146 deaths of Dublin residents from all causes last week showed a decrease of 28 from the number returned in the previous week, and included 41 which were referred to the principal epidemic diseases, against 22 and 48 in the two previous weeks. These 41 deaths were equal to an annual rate of 5·3 per 1000, the death-rate from the same epidemic diseases last week being equal to 4·2 in London and 1·0 in Edinburgh. Of the 41 deaths from these epidemic diseases in Dublin last week, 29 resulted from infantile diarrhœa, 5 from measles, 4 from whooping-cough, 2 from enteric fever, and 1 from scarlet fever, but not one from diphtheria or from small-pox. The deaths attributed to infantile diarrhœa, which had increased from 4 to 34 in the four preceding weeks, declined to 29 in the week under notice, while the deaths from the remaining epidemic diseases showed but slight variation from the numbers recorded in recent weeks. The 146 deaths at all ages included 53 of infants under one year of age, and 23 of persons aged upwards of 65 years; the deaths of infants were 7 in excess of the number in the previous week, while those of aged persons showed a decline of 12. Of the total deaths 37, or 25 per cent., occurred in public institutions. The causes of 3, or 2·1 per cent., of the total deaths last week were not certified; in London all but one of the causes of death were duly certified, while in Edinburgh the proportion of uncertified and unspecified causes of death amounted to 2·5 per cent. In the City of Belfast the death-rate during the week ending August 5th was equal to 16·6 per 1000, against 16·3 and 14·2 in the two preceding weeks. The 123 deaths from all causes included 25 which were referred to the principal epidemic diseases, against 22 and 24 in the two previous weeks. These 25 deaths were equal to an annual rate of 3·4 per 1000, and included 21 from infantile diarrhœa, 2 from whooping-cough, and 2 from diphtheria. All the causes of death in Belfast last week were duly certified, and 39, or 32 per cent., of the total deaths occurred in public institutions.

THE SERVICES.

ROYAL ARMY MEDICAL CORPS.

THE undermentioned Majors to be Lieutenant Colonels:—Thomas McCulloch, vice Sir J. Fayrer, Bart., retired (dated July 29th, 1911); John Ritchie, vice T. H. F. Clarkson, retired (dated July 29th, 1911); Stuart Macdonald, vice D. M. Saunders, retired (dated 29th July, 1911); Maurice P. C. Holt, D.S.O., vice H. W. Austin, retired (dated July 29th, 1911); William L. Gray, vice G. W. Brazier Creagh, retired (dated August 2nd, 1911); and Edward G. Browne, vice D. Hennessy, retired (dated August 2nd, 1911).

The undermentioned Captains to be Majors (dated July 27th, 1911):—William A. Woodside, Littleton F. F. Winslow, Otto W. A. Elsner, Arthur A. Seeds, Henry S. Anderson, Langford N. Lloyd, D.S.O., Thomas C. MacKenzie, D.S.O., Edward P. Connolly, James H. R. Bond, and Harold H. Norman.

Colonel T. J. R. Lucas, C.B., Principal Medical Officer of the Jhansi and Jubbulpore Brigades, has arrived home on leave of absence from India. Lieutenant-Colonel M. L. Hearn, at present serving in the Dublin District, has been placed under orders by the War Office for a tour of service in Ceylon. Major G. St. C. Thom, commanding the Station Hospital at Subathu, Simla District, has been granted one year's extension of his tour of service in India by H.E. the Commander-in-Chief. Major F. M. Parry has been placed under orders to proceed to Mauritius during the ensuing trooping season for a tour of foreign service. Major W. P. Gwynn has been transferred from Karachi to the Station Hospital at Quetta. Major T. MacDermott, specialist in ophthalmology at the Royal Herbert Hospital, Woolwich, has been selected to command No. 2 Cavalry Field Ambulance at the coming manœuvres on Salisbury Plain. Captain J. T. Johnson, from the Station Hospital at Bareilly, has taken up duty at Ranikhet. Captain H. C. Hildreth, from Dublin, has been placed in medical charge of the Artillery Camp at the Glen of Imaal. Captain J. M. B. Rahilly, on return from a tour of service in Egypt, has been appointed to the Woolwich District. An exchange on the roster of foreign service has been approved by the War Office between Captain M. F. Foulds, specialist in advanced operative surgery at Belfast, and Captain A. F. Carlyon, at present doing duty at the Military Hospital at Devonport. Captain R. E. U. Newman has been transferred from Rawal Pindi to the Military Hospital at Murree. Captain E. J. Kavanagh has joined the Station Hospital at Ranikhet from Delhi. Captain E. M. Middleton, from Amritsar, has been appointed to the Station Hospital at Rawal Pindi. Captain R. G. Meredith, on completion of a tour of foreign service at Malta, has been placed in Medical Charge of the Troops at Totley Camp. Captain A. A. Seeds, at present attached to the Military Hospital at Hounslow, has been placed under orders to proceed for a tour of duty with the Northern Army in India during the coming trooping season. Captain W. L. Baker and Captain R. J. C. Thompson have arrived home on leave from abroad. Captain G. W. G. Hughes has been appointed for duty in the Northern Command. Captain G. F. Sheehan, who is serving in India, has been appointed Specialist in Mental Science to the Northern Army. The following officers have been placed under orders by the War Office to proceed to India for a tour of service with the Southern Army during the coming trooping season: Lieutenant R. C. Prinst, Lieutenant R. C. Paris, Lieutenant A. W. Bevis, Lieutenant M. J. Williamson, Lieutenant M. White, and Lieutenant J. R. Yourell. Lieutenant W. J. Dunn, from Kirkee, has taken up duty at the Military Hospital, Colaba. Lieutenant R. O'Kelly has been transferred from the Bangalore Brigade to the Meerut Division and posted for duty with the Bareilly Brigade at Ranikhet. Lieutenant A. G. Jones, from the Military Hospital at Tidworth Park, has been placed in Medical Charge of the Artillery Camp at Lark Hill, Salisbury Plain. Lieutenant D. E. C. Pottinger, from Lucknow, has taken up duty at the Station Hospital, Bareilly. Lieutenant D. H. C. MacArthur has been transferred from Ambala Cantonment to the Military Hospital at Dagshai. Lieutenant J. A. Clark, from London, has joined for duty at Cairo.

INDIAN MEDICAL SERVICE.

The King has approved of the following promotions:—Lieutenant-Colonels to be Brevet Colonels (dated Jan. 1st, 1911): William Barney Bannerman and Henry Francis Cleveland. Captain to be Brevet Major (dated Jan. 1st 1911): Samuel Rickard Christophers.

The King has approved of the retirement of the undermentioned officers:—Surgeon-General Percy Hugh Benson (dated July 26th, 1911). Lieutenant-Colonel James Farquarson Maclaren (dated June 24th, 1911).

Lieutenant-Colonel W. R. Edwards, C.M.G., has been appointed by the Foreign Department of the Government of India to be Administrative Medical Officer of the North-West Frontier Province, in succession to Lieutenant-Colonel A. L. Duke, appointed to Baluchistan. H.E. the Governor of Bombay in Council has appointed Lieutenant-Colonel H. C. L. Arnim to officiate as Sanitary Commissioner for the Government of Bombay during the absence on deputation of Lieutenant-Colonel T. E. Dyson. Lieutenant-Colonel A. Coleman has relinquished charge of the duties of superintendent of the Multan District Jail to Captain W. W. Jeudwine. The services of Lieutenant-Colonel H. Hendley, civil surgeon of Lahore and professor of forensic medicine to the Government College at Lahore, have been placed at the disposal of the Government of India by the Punjab Administration. Lieutenant-Colonel C. H. Bedford, who has for several years been in charge of the Excise Laboratory at Kasauli as Chemical Expert, has been

granted leave of absence home from India for six months. Major E. D. W. Greig, assistant director of the Central Research Institute at Kasauli, has been granted eight months' leave of absence home from India. Major E. M. Illington has been transferred to Vizagapatam as Civil Surgeon and Superintendent of the Medical School. Major P. Dee, on return from leave, has been appointed Civil Surgeon at Mandalay, in succession to Major A. Fenton, transferred to Rangoon. Major H. S. Wood, on return from leave, has been appointed Civil Surgeon of the Rajshahai District. Captain C. G. Seymour has been appointed by H. E. the Commander-in-Chief as Specialist in the Prevention of Disease to the Dehra Dun Brigade, and has been placed in charge of the Bacteriological Research Laboratory at Dehra Dun. Captain L. B. Scott, on return from leave, has been appointed to Sylhet as Civil Surgeon. Captain H. Steen has joined for duty at the Presidency General Hospital at Calcutta during the absence on leave of Captain B. Foster. The services of Captain J. Kirkwood has been placed temporarily at the disposal of the Government of Madras. Lieutenant I. H. Bonnar has been appointed Civil Surgeon of the Garo Hills District.

TERRITORIAL FORCE.

Royal Army Medical Corps.

5th London Field Ambulance, Royal Army Medical Corps: Lieutenant William C. Macaulay to be Captain (dated June 13th, 1911).

Attached to Units other than Medical Units.—Lieutenant Frederick J. Green to be Captain (dated April 11th, 1911). Captain Edmund E. Dyer to be Major (dated July 5th, 1911).

For Attachment to Units other than Medical Units.—Arthur Edward Gladstone to be Lieutenant (dated May 16th, 1911). John Brabant Bate to be Lieutenant (dated June 17th, 1911).

The Southern General Hospital, Royal Army Medical Corps.

The 4th Southern General Hospital, Royal Army Medical Corps, has just completed the 15 days' annual training at the Military Hospital, Devonport. The camp consisted of two officers and 32 non-commissioned officers and men, with Major H. W. Webber and Lieutenant W. H. Scrase. Lieutenant-Colonel C. E. Russell Rendle commanded the unit.—The 2nd Southern General Hospital, Royal Army Medical Corps, from Bristol is now at the Military Hospital, Devonport, for the annual course of training.

Correspondence.

"Audi alteram partem."

THE CHOLERA CLOUD ON THE CONTINENT.

To the Editor of THE LANCET.

SIR,—While anxious to avoid creating any unnecessary alarm, may I say that it will be unpardonable neglect if sanitary authorities ignore the early symptoms indicating the possibility of a general outbreak of cholera. The fact that the Seventh International Congress of Dermatology and Syphilology and the Seventh International Congress on Tuberculosis which were to meet at Rome next September have been postponed is in itself a sufficiently serious matter. The Congress on Tuberculosis would have been a particularly important event. The preceding Congress met at Washington in the United States three years ago and some 6000 members attended. Among these no less than 800 came from Europe. Some members living in remote colonies and intending to attend the Congress at Rome have by this time left their homes, and one delegate from New Zealand has already arrived. To disappoint these distant travellers and to put off a congress of such importance is only justifiable in the face of some grave danger. Certainly, to judge from the cases of cholera reported during the last few weeks, they have nearly all come from Italy. Though occurring at Trieste, Gratz, Vienna, Marseilles, the patients had arrived from Italy. Even on the other side of the Atlantic the ships that have been detained at the New York quarantine station had travellers on board who came from Italy and who seemed to be, or in some cases actually were, suffering from cholera.

It is not necessary, however, for cholera to spread in Italy before the other western nations of Europe may consider themselves menaced. In Russia, it is true, the cholera has prevailed for several years without affecting the west of Europe, but it has now reached Constantinople, and from thence has travelled westwards to Bulgaria and Roumania, cases having occurred at Sofia and Bucharest. A Constantinople telegram dated August 2nd states that 43 cases of cholera and 22 deaths had occurred in that town within the previous 48 hours. If correct, such figures mean a great deal more than what we frequently hear about a few sporadic cases that generally occur during the hot weather. Thus there is no disguising the fact that we are once again exposed to the risk of a widespread outbreak such as occurred in 1892 and 1893.

There should be, however, an all-important difference. During the 18 or 19 years that have elapsed very great improvements have been effected. It is true the water fanatics rather discounted the moral teaching of the last epidemic. Important as it is to secure an ample and pure water-supply, this did not, and does not, suffice to prevent cholera epidemics. In 1907 there were published in THE LANCET an account and plans drawn to scale and photographs of certain slums which still remained at Hamburg.[1] These narrow, overcrowded courts had not been altered or improved notwithstanding the appalling havoc wrought in them during the epidemic of 1892. At Hamburg the water-supply was generally condemned as contaminated and this was altered promptly, elaborately, and at great expense. On the other hand, sufficient attention was not given to the fact that the cholera death-rate varied from 4·48 per 1000 inhabitants of the Harvestehude quarter to 27·50 per 1000 inhabitants of the Veddel quarter, though both these quarters of Hamburg received identically the same water-supply. So far as large towns were concerned, the most fatal epidemic after Hamburg was that of Havre, and here the water-supply was never suspected. On the contrary, some convincing statistics were published showing that it was not contaminated. But at Havre to-day, as at Hamburg, there still remain streets and courts, veritable fever dens, inviting all epidemics. At Havre, as at Hamburg, some of these danger centres have been pulled down, but some still remain standing. Therefore, all the danger is not dispelled. Something has been done, but not enough.

The extreme poor of most of our large cities still huddle together in overcrowded, dark, badly ventilated, dirty dwellings. Many more have not the excuse of extreme poverty. Their homes are insanitary because they are slovenly, indifferent, intemperate, incompetent, and idle in all matters of domestic management. Such a population is a culture ground for the cholera germ, and as long as all large cities can show a population of this kind, however small a section of the whole, we are not safe. To-day, in truth, everybody professes to believe in the necessity of sanitary measures and improvements. The difficulty remains, however, that epidemics are only prevented by far-reaching reforms, such as the draining of a district, the rebuilding of insanitary areas; and these public works cannot be carried out at the last moment when some urgent danger presses upon us. These things should be written about and spoken about when all is quiet, but it is just during those happy times of quietude that no one will listen. We must have a cholera epidemic, or a very close approach to one, before the general public will pay any real attention to the question. That science may know better does not help, for the needed reforms will not be efficacious nor will the money to pay for them be forthcoming unless the general public is quite convinced as to their necessity.

Nor is our civic morale yet all that it should be. Builders and speculators in unwholesome property still exist, and overcrowded tenement dwellings bring in large incomes to their owners; all of which means that many persons are actually interested in thwarting sanitary reform. At any rate they are willing that such changes as must be made should be made slowly. Hence it is not surprising that the obvious lessons to be derived from the cholera epidemics of 1892 and 1893 have not produced all the good expected from

[1] THE LANCET, Dec. 7th and 14th, 1907.

them at the time. The suffering, the dead, and the fear of death were forgotten too soon. Now perhaps an epidemic is upon us again, and it is too late to lament over the little use made of the 18 years of respite.

Of course, much has, as a matter of fact, been done, but not nearly so much as should have been done. To use a familiar simile, it is as if war had begun again. The early cases notified may be compared with the enemy's scouts and skirmishers who may be said to have crossed the frontier and invaded our part of Europe. Will they report that they have seen food for plunder and thus entice the main body to invade our lands; or will they return crest-fallen because they found everything so clean and in such good order that it did not seem worth while attempting a general attack? The cholera invasion of 1892 was not so successful as the previous outbreak of the same character, so perhaps this time the enemy may not venture on more than threats such as those recorded above. Should this, fortunately, prove to be the case, it is to be hoped that the alarm raised will suffice to draw attention to the fact that many of the obvious lessons taught by the previous epidemic have not yet been fully applied.

I am, Sir, yours faithfully,

Fulham, August 8th, 1911. ADOLPHE SMITH.

A QUESTION IN EUGENICS.

To the Editor of THE LANCET.

SIR,—As an alienist physician and a teacher with a not inconsiderable experience of mental diseases, and being acquainted with the care of epileptics suffering from mental symptoms, I consider it to be my duty to offer advice to your correspondent (of July 29th) who desires to have his epileptic son of 12 sterilised to prevent his having children if he should live to a marriageable age.

Let me be certain about the actual state of this boy. Presumably there are no (or only slight) mental symptoms, for otherwise detention in a special institution under special treatment would meet the circumstances, whilst the epilepsy itself, although it would seem not to prohibit matrimony should the son reach his majority and then care to exercise his privileges, is yet of such a nature as to disqualify for the ordinary avocations of life and is non-traumatic. Altogether this opportunity to discuss a very vexed question in eugenics acknowledges that you are conscious of the "signs of the times," and it will certainly afford the medical profession and others the means of ascertaining views presented on both horns of a very difficult dilemma and upon a matter of great public importance.

In spite of the tendency on the part of Nature towards the normal, and in spite of the apparent disposition of the germinal molecules to sustain and reproduce under favourable conditions of selection what is healthy and normal, epilepsy in my opinion, and in that of others who have studied and written upon the subject, has been proved by irrefragable statistical evidence to be the most heritable of all the neuroses and of all mental diseases; that is to say, "pure" epilepsy, or even epilepsy associated with insanity, is more often the antecedent of epilepsy than is insanity of insanity; and this is probably known to your correspodent, who by his suggestion in regard to this disease *a fortiori* suggests the treatment for many other less prominent neuroses—thus proposing to extinguish or at any rate to endeavour to prevent the extension of epilepsy in his own descendants.

The first question is whether we, as doctors, are to consider ourselves bound mainly to do the best we can for the individual or whether our care is to be for the race, and possibly the view taken depends on the ethical standard accepted by each person who ventures upon advice. Personally I am strongly in favour of the individualist view, for I conceive the ethical end to be the "perfection" of our patient, and this in the most active, most moral, and most intelligent direction consistent with time, circumstances, and environment.

As to the legal and moral aspect, a father is morally bound—i.e., by custom, by family ties, and by blood relationship—to do the best in his power for his son (or daughter), because the solidarity of the family is the essential principle to be kept in view in any community, and parental responsibility must be uppermost for the head of the family. He is bound to sustain, to preserve, and to shield his son from harm, so that his son's mental and physical powers, whether limited or of the ordinary range, may develop to the greatest perfection, and so that he may derive from them the greatest use and happiness.

The question of operation (or according to some "mutilation") for mental deficiencies or bodily ailments, is, in my opinion, not one to be entertained by the father, for he is concerned only with fostering the directly self-preservative instincts of his offspring—speaking generally, those relating to his own livelihood—and not those remotely relating to posterity. Legally, therefore, he has no option, but I am not a lawyer, and to him posterity is an unrealisable responsibility; still, if the community should enforce such an ordinance as sterilisation for its own future welfare, which it is entitled to do, then the parent is bound to accede to such indirectly self-preservative rules as may be agreed. I have no doubt in my own mind that the race would greatly benefit in physique by such enactments, but possibly not equally so in moral and mental qualities, for I look upon the presence of human weakness as a moral appeal to the strong and as serving a useful purpose in the moral development of any people.

I should like to be informed at what limit—i.e., for what defects—are such mutilations to cease? Are such operations to apply only to epileptics or those who are insane, some of whom we know occasionally recover completely? If for these, then why not for inebriates and criminals, or those with cancerous or tubercular tendencies, or those who are predisposed to paralysis, and if for these, again, why not for other persons who may be deficient in other forms of self-control, those, for instance, who inordinately gratify appetite and passion, those who are wanting in thrift and other prudential considerations, or for that matter those who exhibit the unpardonable crime of political defection or for any other apostasy? Furthermore, who is to be the final arbiter? And is the father himself averse from being subjected to the operation to prevent the possibility of more epileptic descendants?

The treatment least trying to parents and most acceptable to the main body of opinion in this country would be the provision by the State (or the local authority), with the sanction of Parliament, of a "home" wherein such cases could be made busy and happy, in which their lives would be fully occupied with employment congenial and graded to their abilities, and where their health and pastime could be adequately supervised. In this direction alone, in my opinion, lies the best and only justifiable solution. We are as yet unprepared for the (?) moral effect of a large number of "sterilised" men (and, of course, women) in the community; and even the State of Indiana, U.S.A., where 700 such persons are already said to exist, is blenching at the prospect!

Let me, in conclusion, relate an experience. I once had the care of a young medical man who had been the favourite pupil and "interne" of one of the physicians to the late Queen Victoria. He developed delusions, under the influence of which he so mutilated himself that he removed the whole of the external genitalia. Later, he sank into a state of unambitious passivity, without the desire or the capacity to originate conversation or to heed his surroundings. His mental state was that of careless and listless indifference to outward stimuli. He could occasionally be roused by questions referring to his past life, but he took no interest in the present or the future, which was beyond the power of any appeal to effort or action. He lounged or sat about, a slovenly inert wreck, dishevelled, self-neglectful, untidy, and personally disordered—a state of living death worse than could happen to the average epileptic who not infrequently enjoys a useful interparoxysmal life. That such a state was partly the result of sex "mutilation" admits of no doubt in my mind, and such reducing mental consequences of "restrictive" eugenics must not be overlooked. I am strongly of opinion, after consultation with the titular heads of the medical profession, that suggestions in regard to sterilisation are at the present moment premature and would not be tolerated. They have no moral support and certainly, at present, they have no legal justification.

I am, Sir, yours faithfully,

Claybury, August 3rd, 1911. ROBERT JONES, M.D. Lond.

To the Editor of THE LANCET.

SIR,—The sterilisation of the unfit is legalised in the State of Indiana and also in Switzerland. In the former several hundreds of cases have been performed with very successful

results, but so far as I know eugenic sterilisation has never been done in Great Britain. Assuming, however, that the law permits it, in my opinion a surgeon would be morally right in acceding to the request of the parent who desired that an epileptic child should be sterilised. Nay, I would go further, and after careful delving into the family history, should it be apparent that there is some morbid flaw in the mosaic of the germ plasm of the parents, I would strongly advise that they also should be sterilised if still capable of producing offspring. The method which should be adopted is most important. Castration is crude and brutal; X rays uncertain and inefficient; the simplest, the best, and the most permanent would be vasectomy, which makes no difference to the bodily functions, has no ill-effects, secondary sexual characters would be developed, and nothing would be prevented but the power of procreation.

The answer to the question depends upon whether you regard the rights of the individual as absolute and the claims of the race as non-existent. If you do, sterilisation will be an accursed thing; if not, it will be gladly welcomed. As marriage is the supreme eugenic institution, why should an epileptic child be permitted to grow up, marry, and produce offspring suffering from physical and mental defects? Is marriage the intimate personal affection, the spiritual tie, the indissoluble union, which purifies the passions of the sexes and raises us above the level of the beasts? Is marriage for the sake of parentage and parentage a trust for the race? Must we be ever satisfied that the ghastly burden of disease of body and mind should be freely transmitted from age to age and no steps be taken to dam the overflow of this reeking cesspool? Should we leave open the flood-gates through which has poured a devastating torrent of degraded humanity? Mr. Roosevelt has said "A nation's chief blessing was that it should leave its seed to inherit the land. No refinement of life, no delicacy of taste, no material progress, no sordid keeping up of riches, no sensuous developments of art and literature, can in any way compensate for the loss of the great fundamental virtues, and of these great fundamental virtues the greatest is the race's power to perpetuate the race." Ruskin stated that the veins of wealth are purple and that the Divine intent of all wealth is the production of a healthy race.

The unfit should have the right to live, and live well—no one will question that—but the right to propagate should be denied them. The average quality of a race is but the average quality of the individuals composing it. If the physically and mentally weak be allowed to propagate, and if, as it seems to be the case at present, they reproduce themselves faster than the better strains, the relative numbers of such persons in the country must increase and the average quality of the race deteriorate. The best stocks are postponing marriage and restricting the number of their offspring. The latter are producing motor-cars, the former children.

> "Better, oh better, cancel from the scroll
> Of universe one luckless human soul,
> Than drop by drop enlarge the flood that rolls
> Hoarser with anguish as the ages roll."—FITZGERALD.

I am, Sir, yours faithfully,

Claybury, August 1st, 1911. C. T. EWART, M.D. Aberd.

SALVARSAN ("606") AND MERCURY IN THE TREATMENT OF SYPHILIS.

To the Editor of THE LANCET.

SIR,—In to-day's LANCET (July 29th) Major H. C. French, R.A.M.C., replies to the criticisms of myself and others on his paper on this subject that appeared in THE LANCET of June 24th. The party system in politics, by insuring searching criticism, gives the country the opportunity of arriving at an unbiassed opinion on the questions at issue; and likewise with any new therapeutic agent it is essential that adverse critics should be found to lay before the medical public all the possible evidence against the new treatment. The medical profession must always be equally indebted to the opponents and advocates of any new "specific."

Major French observes the rules of debate and with courtesy replies to criticism, and it is a matter of regret that Mr. Ernest Lane makes no attempt to reply to my criticism of his published opinion. Mr. Lane has apparently changed his mind in regard to the danger and value of salvarsan treatment, and makes it a grievance that I should have thought that he meant what he said in December last, which I quoted as the only record of his opinion that I can find. Major French quotes me as writing in support of the great value of inunctions and injections of mercury as shown by the Wassermann reaction. I am sorry that he thought my advocacy of salvarsan meant detraction of mercury. That this is not my view is shown by the paper that I wrote with Dr. A. Manuel in the *Practitioner* for June, where we concluded that "salvarsan when it does produce an alteration of the serum reaction does so more rapidly than mercury. On the other hand, in the present state of our knowledge it would appear that the percentage of negative results after one or two injections is lower than that observed after a year's course of efficient mercurial treatment." The Wassermann reaction frequently becomes negative after one or two courses of inunction or injection, but these negative reactions are rarely permanent, whereas after salvarsan apparently about 75 per cent. of cases that become negative as the result of such treatment remain so.

I am entirely in accord with Major French's quotation of Mr. Boas's opinion as to the superiority of Wassermann's original technique and the importance of *quantitative* estimations. My modifications are solely trifling matters of technique, with the exception that I use alcoholic extract of rabbit's heart in place of alcoholic extract of syphilitic organs. I have made parallel experiments, using rabbit's heart extract and syphilitic organ extract supplied from Professor Wassermann's own laboratory, and have obtained practically identical results with both, the very slight difference being in favour of the heart extract. At the British Medical Association discussion on the Diagnostic Use of the Complement Fixation Method that took place in July, 1910, and was opened by a paper from Professor Wassermann, I had the honour of reading the second paper. I then said[1]: "Many observers have tried to simplify the test and obviate the necessity for using rabbits and guinea-pigs by making use of the complement and hæmolysin for sheep's corpuscles present in human blood serum. It seems to me, however, that the most essential of all factors in a comparative test such as this is that all factors except the one to be tested should be constant. With Hecht's, Bauer's, Stern's, or Fleming's technique, however, variants are substituted for constants, for the complement content of human serum varies greatly, and some human serums contain no hæmolytic antibody to sheep's corpuscles, while others contain some but in varying quantities." Later on I said: "I have for the last six months used two strengths of complement and so obtained a roughly quantitative measurement of the complement deviating power of the serum." In a footnote I wrote: "This quantitative measurement can obviously not be determined by the so-called simplified methods."

In the *Quarterly Journal of Medicine* for January, 1911, I wrote: "It is remarkable that though innumerable modifications and simplifications have been introduced during the last two years, the consensus of expert opinion is still strongly in favour of the original technique, or of such slight modifications of the original method as do not necessitate the substitution of variant factors for constant factors." Major W. S. Harrison, R.A.M.C., agrees with me that the original technique is the most reliable, and probably Major Harrison and myself have greater opportunities for extended investigations on this subject than other workers in this country. I have personally examined well over 2000 sera, and as a matter of routine determine the reaction in about 30 cases every week. I am cordially in sympathy with Major French's opinion as to the necessity for standardising the test, and on Dec. 2nd, 1910, said: "I am entirely in accord with Mr. Arthur Shillitoe in desiring the universal adoption of the same technique for the Wassermann reaction."[2]

The points I wished to emphasise were: (1) the extremely small casualty *proportion*, which, being less than 0·2 per cent. even in the early days, is almost negligible; and (2) that salvarsan should be given as a routine in all cases except the very exceptional ones when it is contra-indicated. These points I do not think have been satisfactorily met by Major French and have been ignored by Mr. Lane. I do not suggest, and never have suggested, that the time has yet arrived when mercury can be dispensed with in

[1] Brit. Med. Jour., Nov. 5th, 1910, p. 1430.
[2] West London Medical Journal, January, 1911, p. 48.

every case; on the contrary, I think that there is a large percentage where mercury is indispensable.

I am, Sir, yours faithfully,

HUGH WANSEY BAYLY.

Upper Berkeley-street, July 29th, 1911.

To the Editor of THE LANCET.

SIR,—In THE LANCET of July 29th Major H. C. French states that it is impossible to carry out the Wassermann reaction quantitatively by any of the ordinarily suggested modifications. May I point out to you that this is not only possible, but very easy, on the process which I have elaborated and which I described in my second Hunterian lecture?[1] I have now used the method constantly, almost daily, for a year and am absolutely satisfied with it, both as regards its simplicity and quickness and as regards the clinical value of its results. I have, however, found it convenient to alter the strength of my antigen so that a reaction given with a dilution of 1 in 10 is to be regarded as a positive, though weak, reaction. I should like to call especial attention to the method, since I quite agree as to the great importance of performing the test quantitatively, and this is the only process by which it can be done with ease, rapidity, and accuracy.

I am, Sir, yours faithfully,

Harley-street, W., August 9th, 1911. W. D'ESTE EMERY.

THE ADMINISTRATIVE CONTROL OF TUBERCULOSIS.

To the Editor of THE LANCET.

SIR,—Will you allow me to correct a misleading impression which I gather has been produced in the minds of some by the trend of the discussion on "The Administrative Control of Tuberculosis" at the recent meeting of the British Medical Association, reported in THE LANCET of August 5th?

When the invitation of the committee of the section reached me that I should open the discussion *re* the Tuberculosis Dispensary, I hesitated lest it might seem that in advocating the dispensary I was placing its claims in opposition to that of the sanatorium, the hospital for advanced cases, and other elements in the campaign against tuberculosis. Because of this, it seemed desirable once more to throw into prominence—as I have always endeavoured to do—that, while the tuberculosis dispensary is of much direct value, its significance is greatly increased by close relationship to the other factors in a coördinated scheme. The tuberculosis dispensary constitutes, on the one hand, an information bureau, a receiving house for tuberculous patients, a "sorting house" of the different types of case, the centre of direction and treatment for the great mass of patients who do not require institutional treatment, a "clearing house" for patients of different kinds who need hospital treatment; and, finally, a storehouse of records regarding tuberculosis, as it occurs within the community. On the other hand, the dispensary should be in closest relationship with—if, indeed, it be not the developmental centre of—the other agencies which are evolved naturally by the local needs—namely, the sanatorium (the hospital for early cases), the hospital for advanced cases, and the farm colony. In proportion as these institutions are linked together and form with the dispensary a coördinated scheme, in such proportion will the complex problem of tuberculosis be effectively solved.

The relationship between municipal and voluntary effort will readily adjust itself on the part of those who are really interested in the solution of the question as to the need for, and the limitations of, the different factors. It has been sometimes ignorantly suggested that the Edinburgh scheme is chimerical—not practical. The facts are quite otherwise. It is just because of its intensely practical character that this coördinated scheme has come into being. It has been the slow and natural evolution from the needs of the case, as these have presented themselves in the day by day antituberculosis activity, which commenced in Edinburgh with the foundation of the Victoria Dispensary in 1887. Following the elaboration of domiciliary visitation there came to be felt the need for a sanatorium, which was established a few years later, then the need for the segregation hospital for advanced cases, then notification, and, finally, the farm colony for the care of a certain number of recovered patients to whom return to ordinary conditions of life meant physical relapse and economic wastage. With the growth of public opinion, and the direction of municipal activity in relation to tuberculosis, certain aspects of the problem were especially taken up from that side. The municipality sought expert opinion as to what departments of the work came properly within their sphere. The result was that they took in hand the hospital for advanced cases, and introduced compulsory notification. There can be little doubt that this is the side from which local authorities, as such, should approach the question. Within the last 18 months a closer relationship has been established between the municipal and voluntary divisions of the work, and the final result is a scheme of closely coördinated activity, in which each element plays its distinct rôle, and the several elements are harmoniously linked together for the common good.

If the complex problem of tuberculosis, with its extraordinarily protean manifestations, be properly understood, there can never be a question as to the competing value of notification, the dispensary, the hospital for advanced cases, the sanatorium or the farm colony, each of which, however effective in itself, is less effective than it might be if the other factors be awanting.

I am, Sir, yours faithfully,

Edinburgh, August 5th, 1911. R. W. PHILIP.

[1] THE LANCET, March 4th, 1911, p. 564.

ARTIFICIAL PNEUMOTHORAX IN TREATMENT OF TUBERCULOSIS.

To the Editor of THE LANCET.

SIR,—I regret that Dr. H. Rhodes in his letter published in THE LANCET of August 5th asserts that I describe "rather contemptuously" Brauer's and Spengler's method of inducing an artificial pneumothorax. I am indebted both to Professor Brauer and to Dr. Lucius Spengler for advice freely and courteously given when I have met with difficulties in the course of the treatment in England; and for me to be "contemptuous" towards these pioneers would be almost as incongruous as it was for the juvenile curate to commence his sermon with "St. Paul says, and I partly agree with him."

Dr. Rhodes draws on his creative inner consciousness when he credits me with stigmatising Brauer's and Spengler's method as "either obsolete or at any rate almost useless." I have neither held nor expressed such a view. On the contrary, I stated that Brauer's method was not only still practised, but that its adherents claim for it certain advantages over Forlanini's method.

The arguments for and against the two methods of inducing an artificial pneumothorax are too numerous and lengthy to be fully dealt with in these columns, but there is one point I should like to emphasise at once. The open method, known as Murphy's, Brauer's, or the schnitt method, presents as many septic pitfalls as a laparotomy, and among the first 140–150 reported cases in which Brauer's method was adopted there were four deaths from septic infection of the pleural cavity (v. Muralt, Brauns). The physician is therefore not likely to carry out this operation in person. Forlanini's "puncture" method as practised by Saugman requires no lancets, ligatures, or artery forceps. The physician, therefore, who has mastered its technique may carry it out from start to finish without the aid of a surgeon. Consequently it is to the advantage of the patient that this method be taught which involves no changing of horses in midstream, and which accordingly appeals more to the physician on whom, in 99 cases out of 100, the choice of treatment depends.

The brilliant results which have been achieved by both methods certainly outweigh the occasional disasters which have occurred. Saugman has now given over 2200 injections to 104 patients, and he reports only one death due to the treatment itself. Death was due not to gas embolism but to pleural reflex—an accident that may also befall the

followers of Brauer's method. Deaths from gas embolism certainly have occurred in the course of the treatment by the puncture method, but I am convinced that most, if not all, were due to faulty execution of the proper technique.

I am, Sir, yours faithfully,

Gorleston-on-Sea, August 7th, 1911. CLAUDE LILLINGSTON.

THE TREATMENT OF ECLAMPSIA.

To the Editor of THE LANCET.

SIR,—Referring to some remarks attributed to me on pp. 378–379 of your last issue, I shall be glad if you will correct the report of what I said. I have not wholly abandoned obstetric interference by the milder methods in certain cases of eclampsia. As to Schultze's method, I said it was dangerous in *inexpert hands*, and not suitable to be taught to the ordinary midwife.

I am, Sir, yours faithfully,

Leeds, August 5th, 1911. JOHN B. HELLIER, M.D.

SPONTANEOUS COMBUSTION OF METHYLATED SPIRIT.

To the Editor of THE LANCET.

SIR,—The following incident that happened recently may be worthy of notice if, as I consider, a hitherto unsuspected danger is revealed.

During the extreme heat and sunshine of the second week of July a party of girls went along the cliffs for a picnic and took with them the usual outfit for making tea—viz., provisions, cups and saucers, spirit lamp, spirit container, &c. The lamp was one of those which have no wick, but just a central absorbent surface somewhat like a pen-wiper. The container (of the capacity of one pint) was half full of methylated spirit, and had a screw metal stopper and slight lip at one angle. When tea was thought of one of the older girls proceeded to pour the spirit from the container on to the lamp, and almost immediately her younger sister, who was sitting a few feet to leeward of her, was seen to be enveloped in flame. As the dress material worn by the girl was naturally of a light texture on such a day, a most serious accident was probably averted by the promptitude with which the elder sister made her lie flat on the grass and stifled the flames with her own skirt. As it was, the younger girl's left arm was deeply burned from above the elbow to the wrist. The promptitude and value of the elder sister's action were clearly manifest when I examined the skirt worn by the younger sister and found it badly singed from the waist to the lower hem.

The lamp and container were conveyed to the place where the picnic was held in a basket along with the cups and saucers. The other contents of the basket were not, therefore, very hot. No naked light of any kind was in the vicinity at the time.

I am, Sir, yours faithfully,

JOHN J. ROBERTSON, M.B. Glasg.

Portpatrick, Wigtownshire, August 1st, 1911.

PS. What should be the flash-point of methylated spirit?

*** The boiling-point of methyl alcohol, or wood spirit, is 66° C.; that of ethyl alcohol is 78° C.; so that the boiling-point of methylated spirit would lie somewhere between these figures. Light petroleum may have been present in the methylated spirit, but even then there can be no "flashing" or ignition without an initiating spark. Thousands of gallons of rapidly volatile petrol are carried through the London streets without being ignited by the excessive heat of the present summer. We think there must be an essential piece of evidence missing in the above incident, and that further inquiry would probably elicit the presence of a starting spark somewhere, which was overlooked. The incident shows, at all events, that care needs to be exercised when any inflammable substance is being handled in case a fire-brand is near and unsuspected.—ED. L.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Degree Day at the University.

AT the recent medical degree day at the University of Manchester, the Vice-Chancellor, Sir Alfred Hopkinson, in his address to the graduates made several pronouncements of great interest on matters of medical education. Amongst the questions dealt with was the character of the instruction and of the course of study which should be required in scientific subjects as the preliminary training for medical students. The Victoria University had always insisted that in the first of the five years required for a degree in medicine a sound training in general science should be taken within the University itself or in some similar institution. By recent changes in the curriculum of the University the study of anatomy might be begun in the latter part of the first year. How far could these preliminary scientific studies be so arranged as to afford a sound general scientific training and at the same time be suited to those who wished to study medicine in such a way as definitely to affect their future work? The Vice-Chancellor quoted the important remarks made by Sir Thomas Barlow, the President of the Royal College of Physicians of London, before the London University Commission. "Many objections," Sir Thomas said, "have been urged in times past by those who have led the crusade for a more accessible medical degree in London against the preliminary scientific subjects of the London University curriculum. I submit that under the recent modifications these objections are now invalid, and that it would be very short-sighted, in view of the modern progress of medicine, which has been largely based on biological, chemical, and physical development, to suggest any curtailment of the scientific equipment of our medical graduates. The principle to which I have already referred, of endeavouring to direct studies in these subjects along lines which will bear directly on the subsequent clinical part of the curriculum is, I submit, absolutely vital." The whole of the passage applied, *mutatis mutandis*, to the position in Manchester. Already the chemistry course had been modified to bear more directly on future medical study. A course on bio-chemistry was now established, and it had been arranged that some work in organic chemistry should be taken in the first two terms in the academic year. In fact, in the first year, while the standard of scientific attainment was being maintained, the study was being more and more definitely adapted to the special needs of the medical student for his future work. The matter was summed up in the Vice-Chancellor's words, "The subjects of the first professional examination should be taught to medical students in such a manner that they form a real introduction to the subjects of the curriculum in anatomy, physiology, and pathology." Any changes which would curtail the general education and literary culture of the medical man were to be deprecated. It was better that the school stage should be devoted entirely to general education without regard to the prospective profession. True, if boys remained at school till 19, or later, it would be difficult in the later years not to specialise definitely for their particular business or profession; but although in the past school-life had been too short, there was a tendency to-day to go too far in the opposite direction. It was not desirable, in the interests of the pupil or of either the school or the university, that boys should remain at school till the age of 19. Sir Alfred Hopkinson also drew attention to the "splendid opportunities that can now be offered in Manchester for clinical study." They did not for one moment allow, he said, that clinical study could be better carried on in London than elsewhere. By the hearty coöperation of the Infirmary and the other hospitals with the University facilities were offered which had the great advantage of being concentrated as well as extensive. Finally, an appeal was made for a fund to enable original research in medical subjects to be prosecuted.

Is Scarlet Fever an Accident within the Meaning of the Workmen's Compensation Act?

A very important decision was given by Judge Mellor at the Manchester county court on July 28th on the question whether scarlet fever is an accident within the meaning of

the Workmen's Compensation Act, and whether consequently a mortuary porter, who alleged that he had contracted scarlet fever while at work in the Monsall Fever Hospital, was entitled to compensation from the Manchester corporation who employed him. The judge said that the case was the first which had arisen as to the liability of hospital authorities to pay compensation to the members of the staff who contract infectious disease through their work. The evidence showed that the claimant's work included the cleaning out of the mortuary, and that all he had to use was a broom and a bucket of water. He was given no antiseptic whatever. The medical man called for the claimant had said that if the body of a person who had died from scarlet fever was taken into the mortuary—and several bodies had been so taken—it could be said to be a perfect hotbed of germs of disease. The judge on the evidence found that the disease was contracted in the mortuary, and he held that it amounted to an accident within the meaning of the Workmen's Compensation Act. He therefore awarded the claimant 15*s.* a week during incapacity, with costs on the higher scale. A stay of execution was granted, pending appeal.

National Association of Teachers of the Deaf.

The National Association of Teachers of the Deaf held its seventh biennial conference in Manchester on July 24th and 25th. The association has about 350 members. For nearly a century Manchester has taken a prominent part in the education of the deaf, not only in the city itself but beyond. The Royal Schools for the Deaf at Old Trafford, founded in 1823, had a great influence on other communities. When the late Lord Egerton was president of the institution he, along with the committee of the Manchester schools for the Deaf, did much to promote and secure the passing of the Act of 1893, which made the education of the deaf compulsory and a public charge. The Manchester Schools are now the second largest in the kingdom. Practically the whole of the education of the deaf in this country up to about 40 years ago was conducted on the silent method by finger-signs. Since then the lip-reading method has made great progress in the schools. Each individual child is now carefully studied with a view to providing the instruction most likely to be suitable to the case, to obtain the best development of the mental life of the child. The humanising effect of the oral method of instruction is not the least valuable of its merits. A resolution was carried that an increased proportion of the cost of the education of the deaf should be borne by the State, and suggesting that the grants paid should at least be in the same proportion to the total cost as in the case of ordinary elementary education. The cost of education for the deaf in residential schools has risen from £26 in 1893 to about £40. The grant is only 5 guineas, which is out of all proportion to the cost. A further resolution was adopted endorsing the views of the chief medical officer of the Board of Education, that it is wise that deaf children should be admitted to school at the age of 5 years, and that the compulsory school age of deaf children at admission should be brought into line with that of normal children and of blind children. Lord Sheffield, president of the association, in a paper on the State of Deaf-mute Education in Britain, stated that the proportion of certificated to non-certificated teachers had gone up considerably, and that the great majority of the boarding institutions were still under private management, though relying almost entirely upon the contributions of local authorities. The day schools were under local authorities. Lord Sheffield urged the importance of a national organisation of the work of teaching the deaf. He said a proper training college for teachers of the deaf was needed, which might be grafted on to some existing institution more or less under national direction, and which need not be entirely managed by the Board of Education. There were at least 6000 children in various schools for the deaf, and for those he would postulate 700 teachers. It was resolved to make representations to the Chief Secretary for Ireland urging the necessity for the passing of an Act for the compulsory education of the deaf in Ireland. As regards the distribution of deafness, statistics showed that in the British Isles it was decreasing. It would appear that where the mobility of the population was greatest, there deafness was least common. It might be that consanguinity had much to do with certain forms of deafness. In certain parts of Switzerland where people did not move about very freely, and where there was much intermarriage of relatives, deafness occurred to the extent of 1 in 408; whereas in Belgium, where nations met and intercourse was lively, the ratio was 1 in 2247. Dr. J. Kerr Love discussed the medical inspection of school children, with special reference to deaf children. At present, he said, though some children were examined, medical treatment formed no part of the work of the school doctor. This was not enough. To educate the child in a palatial modern school and to send him back for 18 out of the 24 hours to a slum tenement was poor education. Treatment was essential, and if it was to be thorough it must be undertaken in or near the school, in school clinics, with a competent staff of nurses and doctors. An examination of 20,000 cases of ear disease in Glasgow—nearly all the children of the very poor—led Dr. Love to the conclusion that the combination of overcrowding and poverty was responsible for most of the ear disease sent to hospitals. These results, often spoken of as physical degeneration, were not handed down from one generation to another. When disease was really hereditary it affected rich and poor alike. The death-rate amongst very young deaf children he thought was less than amongst very young hearing children. They, however, had worse eyesight, and there was a larger number of mentally deficient children amongst them—about 15 per cent. Deafness, when congenital, was often hereditary, and even persistently hereditary, though congenitally deaf children were not usually mentally defective. In his opinion one thing should be insisted on—viz., that on no account should the deaf, as distinct from the mentally defective deaf, be segregated like the insane.

August 8th.

BRISTOL AND THE WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

The Lord Mayor of Bristol's Hospital Sunday Fund.

THE total amount received this year for the Bristol Hospital Sunday Fund is £1887 13*s.* 3*d.* Last year the amount realised by ordinary collections was £1887 17*s.* 5*d.*, which with sums received at the services in memory of the late King made up a total of £2007 11*s.* Allocations made this year are as follows: £739 10*s.* to the Royal Infirmary, £620 10*s.* to the General Hospital, £232 13*s.* to the Children's Hospital, £110 10*s.* to the Eye Hospital, and £105 1*s.* to other institutions.

Bristol Royal Infirmary.

The report presented by the committee of the infirmary to the governors at their recent half-yearly meeting included several items of interest. The work of the institution seems to be growing, for the excess of this half-year's work over that of the corresponding half of last year is remarkable. There were 2178 in-patients and 23,917 out-patients in the first half of this year, an increase of 350 and 3011 respectively on the work of the first six months of last year. The total income shows a decrease of £21 only, the subscriptions having actually increased by £207 11*s.* The ordinary expenditure shows an increase of £62, but this is partly redeemed by a decrease of £29 in extraordinary expenditure. The balance due to the treasurer on the half year is £783, bringing the total deficit to £4769. In addition to this, the institution stands committed to an expenditure of £70,000 on the new wing, which is to be named the King Edward Memorial Infirmary. Of this sum only £35,000 are in hand. The new building is proceeding, and it is expected that it will be completed within 12 months. The committee, therefore, expects to issue an appeal shortly for £40,000 or £50,000 as soon as the civic fund for a memorial to King Edward VII. is completed.

The British Dental Association.

The annual meeting of the Western Branch of the British Dental Association was recently held at Barnstaple. Mr. J. J. H. Sanders presided, and there was a good attendance of members. The report showed that the branch numbered 117 members, and the financial statement was satisfactory. Mr. Sanders, in the course of an interesting address, stated that an amended and strengthened Dental Act formed the question of the hour for dentists, and added that the tendency of recent legislation had added enormously to the importance of the problem. A paper was read on Tantalum

and its Uses in Dentistry by Mr. H. R. Shapland, and specimens were exhibited by Mr. Sanders, Mr. G. R. Brittan, and others. The annual dinner was held at the Imperial Hotel, Barnstaple. The next annual meeting will be held at Bath, with Mr. Stuart Carter as president-elect.

Henry Soltau, L.R.C.P. & S.Edin., L.F.P.S.Glasg., F.R.G.S.

Mr. Henry Soltau died at Malvern on July 25th. The deceased was the second son of the late Mr. H. Soltau, barrister, of Barnstaple. Mr. Soltau went to China as a medical missionary and performed much useful work there. He was the first Englishman who made the journey across China from west to east. Mr. Soltau acted as an interpreter to the British Forces during the Burmese war of 1885. He returned to England about 12 years ago, was made a Fellow of the Royal Geographical Society, and lectured before the society on his travels in China. At one time he was superintendent and general secretary of the Medical Missionary Association. He had lately been residing at Hornsey-lane-gardens, Highgate, London.

Vaccination in Somerset.

Dr. W. G. Savage, the county medical officer of health of Somerset, states that in 1905 the unvaccinated children in the county were 12 per cent.; in 1909 the percentage had increased to 43 8. The Bridgwater district has 83·3 per cent. unvaccinated children, and Weston-super-Mare 70·1 per cent.

The Inspection of Midwives in Cornwall.

At the last meeting of the midwives committee of the Cornwall county council it was decided, upon the suggestion of Dr. R. Burnet, the medical officer of health, to recommend the county council to pay £100 to the Cornwall Nursing Association for the services of two nurses who should be sub-inspectresses under the Midwives Act.

The Mortuary Question at Falmouth.

At an inquest held recently at Falmouth attention was again called to the state of the mortuary. The coroner, Mr. E. L. Carlyon, is reported to have said that it was a crying shame that the council had done nothing to make the place fit for a post-mortem examination to be made in it. After some discussion the jury requested the coroner to make a further recommendation on the subject to the Falmouth town council.

August 8th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh University: Medical Graduation.

THE summer medical graduation ceremony of Edinburgh University took place in the McEwan Hall on July 29th. Sir William Turner presided, and among those present were the Right Hon. George Wyndham, LL.D., M.P., Lord Rector of the University, and Mrs. Wyndham, the Countess of Grosvenor, and also the Thakore Sahib of Gondal, who is an M.D. of Edinburgh University. The degree of Doctor of Medicine was conferred on 68 candidates, of whom seven were women. Four candidates were awarded a gold medal for their thesis—namely, William Boyd (Scotland), M.B., Ch.B., 1908 for a thesis on the Cerebro-spinal Fluid in Certain Forms of Nervous and Mental Disease; Alexander Ninian Bruce (Scotland), D.Sc., M.B., Ch.B. (with second-class honours), 1909, for his thesis on the Suprarenal Glands and the Thyroid Gland; Kenneth Mackenzie (New Zealand), M.B., Ch.B. (with first-class honours), 1908, for a thesis on the Physiology of the Mammary Gland; and Samuel Alexander Kinnier Wilson (London), M.A., B.Sc., M.B., Ch.B., 1902, for a thesis on Progressive Lenticular Degeneration. Two candidates obtained the degree of Master of Surgery, one of whom, Alexander Pirie Watson (Scotland), M.A., M.B., Ch.B., 1908 (with second-class honours), was awarded a gold medal for his thesis on the Treatment of Fractures by Massage and Passive Movements. The degree of M.B., Ch.B., was conferred on 92 candidates, of whom 5 were women. A number of degrees in Arts and Science were also conferred, and seven candidates obtained the diploma in Tropical Medicine and Hygiene. The Cameron prize in practical therapeutics was awarded to Dr. Simon Flexner of the Rockefeller Institute, New York, for his researches in connexion with cerebro-spinal meningitis and with dysentery and summer diarrhœa. This is the first occasion on which the recipient of the prize has been an American. Professor H. Harvey Littlejohn, in announcing the award, said they expected that in the course of next session Dr. Flexner would give an address in Edinburgh University descriptive of his researches. Professor J. Walker delivered the address to the graduates. He referred to the difference between the University training and that of the Colleges, which, he said, lay in the greater prominence given by the University to the scientific branches of the course. The University, with its well-equipped laboratories, should be in a position to teach those branches well, but there was a lack of correlation between the scientific courses and the general medical curriculum. It was disastrous to the student if he looked on his course as a series of disconnected subjects. He considered there should be a medical school in the University apart from the science school. In his own subject of chemistry, with the best intentions to adapt the course of chemistry to the wants of medical students, he and his assistants were hampered by their lack of knowledge of physiology, pathology, and clinical methods. He should like to see in the University a department of medical chemistry in the charge of teachers who had had a complete medical training. In it should be taught not only the elementary chemistry of the first year, but the chemistry of physiology, pharmacology, and toxicology, immuno-chemistry, and clinical chemistry. After the graduation ceremony a house luncheon was given in the University Union. Among the guests was the Right Hon. George Wyndham, who replied to the toast of "The Guests."

New Medical Chairs at Glasgow University.

Intimation has been received by the Glasgow University Court that the ordinance relating to the new medical chairs at the Royal Infirmary has received the approval of His Majesty in Council. The various elective bodies will now appoint curators to the patronage of the respective chairs, which, it is hoped, will be duly filled in time for the commencement of the winter session.

Aberdeen Provincial Committee: New Medical Officer.

At a meeting of the Aberdeen Provincial Committee, held on August 1st, Dr. George A. Williamson was appointed to the post of medical officer and lecturer on school and personal hygiene at a salary of £400. Dr. Williamson is a native of Inverness, is 40 years of age, and possesses the following degrees: M.A. and M.D., Aberdeen University; D.T.M., University of Liverpool; and D.P.H. (with honours), Aberdeen University. After graduating Dr. Williamson acted as house surgeon, first at Gray's Hospital, Elgin, and then at the Northern Infirmary, Inverness. He then entered the Colonial Service, and in 1895 was appointed medical officer of health of Larnaca town and district in Cyprus, a post which he still holds.

Appointment of School Medical Officers.

At a meeting of the Aberdeen County Committee on Secondary Education, held on August 4th, the report of the medical inspection subcommittee was moved. The report recommends that arrangements should be made with the county council whereby the county medical officer of health should act as chief school medical officer for the general supervision of the scheme of medical inspection, at an annual salary of £50, with two whole-time assistants for the work of actual inspection, the assistants being appointed assistant medical officers of health for the county. An amendment that a whole-time chief medical officer be appointed with one assistant as before was moved, and carried by 20 votes to 10 for the motion. The salaries were fixed at £300, rising by increments of £25 to £400, and £200, rising by increments of £25 to £300 per annum.

August 8th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Royal Institute of Public Health.

THE annual meeting will open at Dublin on Tuesday, August 15th, with a reception by the Countess of Aberdeen and the executive committee in the Examination Hall of St. Stephen's College. At 11 o'clock His Excellency the

Lord Lieutenant of Ireland will deliver his presidential address. The sectional meetings will be: Comparative Pathology and Veterinary Hygiene; Vital Statistics and Preventive Medicine; Chemistry and Bacteriology; Municipal and Parliamentary; Housing of the Working Classes; Town Planning; Chi'd Study and Eugenics; and a Conference of Medical Officers of Health and Port Sanitary Authorities. The list of entertainments includes numerous garden parties, the annual dinner, and a conversazione at the Royal College of Physicians. There will be special services on the Sunday at the Pro-Cathedral and at St. Patrick's Cathedral.

Membership of the Royal College of Physicians.

New by-laws governing the admission of Members of the College, to come into force in January, 1912, have been drawn up by the Royal College of Physicians of Ireland. Candidates must, in addition to passing an examination in medicine and pathology, select from the following groups a special subject, in which they will be expected to reach a high standard of proficiency. The groups are: medicine, gynæcology and obstetrics, pathology and bacteriology, and any further group of subjects deemed by the College to be equal in value to one of the preceding groups. It will be seen that midwifery and gynæcology are now recognised as subjects qualifying for membership.

The Distribution of Lord Iveagh's Gift to the King for Dublin Hospitals.

His Majesty has approved the following grants, recommended by the Advisory Committee:—Mater Misericordiæ Hospital, £4000; Fever Hospital and House of Recovery, Cork-street, £3500; National Hospital for Consumption for Ireland, £3000; Adelaide Hospital, £2750; Sir Patrick Dun's Hospital, £2500; Meath Hospital and Co. Dublin Infirmary, £2250; Richmond, Whitworth, and Hardwicke Hospitals, £2250; Rotunda Hospital, £2250; Royal City of Dublin Hospital, £2000; Dr. Steevens' Hospital, £2000; St. Vincent's Hospital, £2000; Royal Victoria Eye and Ear Hospital, £2000; Royal Hospital for Incurables, £2000; Our Lady's Hospice for the Dying, £1750; Children's Hospital, Temple-street, £1700; Coombe Lying-in Hospital, £1700; Convalescent Home, Stillorgan, £1500; Linden Convalescent Home, £1500; the Orthopædic Hospital of Ireland, £1500; National Maternity Hospital, £1500; Charitable Infirmary, Jervis-street, £1350; Mercer's Hospital, £1350; National Children's Hospital, Harcourt-street, £1000; St. Michael's Hospital, Kingstown, £750; Monkstown Hospital, £500; Incorporated Dental Hospital of Ireland, £500; Rest for the Dying, Camden-row, £500; Drumcondra Medical and Surgical Hospital, £200; and Allan A. Ryan's Home Hospital, £200. The distribution has given rise to comment, as in some cases it seems difficult to recognise its relationship either to the work done by the different institutions or their individual needs.

The Rotunda Hospital.

The board of governors of the Rotunda Hospital has unanimously adopted a resolution thanking Dr. James Roy Freeland and expressing appreciation of his conspicuous ability and courtesy during his three years of office as assistant to the Master.

Health of Belfast.

The report of the medical officer of health to the Belfast city council on August 1st showed that the death-rate during the month ending July 15th was 14·0, as compared with 13·3 in the preceding month and 19·1 in the corresponding month of 1910. The residents of Fort William Park, one of the best suburbs of Belfast, complained to the health committee of the foul smells from the bad drainage of that district, when it was found that the corporation had no plans of the sewers in that quarter. The surveyor's department is at present lowering the sewer in one part of the district and exploring the other part. The drains are to be made right as soon as possible. It was in this district that recently there was an extensive outbreak of diphtheria.

Methylated Spirit Drinking.

At the Donegal petty sessions, held on August 2nd, a man was fined for being drunk on methylated spirit. The district inspector of police pointed out that the drinking of methylated spirit was greatly on the increase in the district. The Belfast and Ulster Vintners' Association has decided to take steps to have the law relating to the sale of methylated spirit altered. Since the increase of the spirit duties under the Budget the sale of methylated spirit has greatly increased, especially in the country towns of Ulster, and has led to a peculiarly objectionable form of drunkenness. The drinking of methylated spirit should be made a punishable offence. In the county of Londonderry, especially round Draperstown, some years ago ether drinking was very prevalent, and on market days in Cookstown and other places—for instance, on the Derry Central Railway, by which farmers journeyed—the smell of the ether could be easily detected. Legal enactments have put an end to this dangerous custom of drinking ether.

Down Lunatic Asylum.

In the report for 1910 of this asylum regret is expressed, and with great truth—indeed, the Inspectors of Lunatics in their fifty-ninth report lament it—that the county councils have failed to avail themselves of the provisions of Section 5 of the Act 1 Edward VII. cap. 17, authorising the provision of a common laboratory as well as of a pathologist who should give instruction in the pursuit of scientific investigation to the medical staff. This clause, unfortunately, is not obligatory. The committee of management of the Down Asylum pledged itself on March 15th, 1902, to contribute in accordance with the spirit of this measure, but, unfortunately, only a few other like bodies followed suit. Unless some such action is taken to keep pace with the advances of modern scientific medicine no real progress can be made in mental diseases, and the medical superintendent of an asylum will be reduced to the rank of a mere clerk recording a mass of useless details in books never seen except by the inspectors and by his board of management, and he will have to continue at word-spinning in his annual reports instead of supplying some really accurately observed scientific facts.

August 8th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Tropical Heat in Paris and the Lack of Water.

THE end of July and the beginning of August at Paris have been characterised by an altogether exceptional heat, as seems also to have been the case in the other European capitals. As a natural consequence there has been an increase in the cases of heat-stroke, of congestive complaints, and of suicides and crimes occasioned by cerebral excitation. Drinking-water has also been deficient—as, indeed, happens nearly every year in Paris during the hot spells—and the deficiency would have been even more serious had there not been a considerable exodus of inhabitants to the country. Both the public and the press complain that, in spite of the huge sums expended by the municipal council for an abundant supply of drinking-water to Paris, such a supply as would do away with apprehension as to its being forthcoming at the time when it would be of greatest service is not yet assured. The normal supply of Paris is undoubtedly insufficient, as is evident so soon as the temperature rises and the sources of supply become less abundant, which is usually the case in summer. On the other hand, the desire to make use of only the present sources of supply for the capital makes it necessary to reject confluents that could be most easily utilised, but which are inadmissible because the water is contaminated by drains and the industrial effluents of the very populous localities surrounding Paris. The water of the Seine used for industrial purposes and for general watering is brought by lifting apparatus which cannot give it sufficient head for employment in those parts of Paris situated at some elevation, such as Montmartre, the Trocadero, the Maison Blanche, and the Buttes Chaumont. Consequently, to obtain a sufficient pressure the water has to be drawn by means of aqueducts from mountain sources having a great pressure. This takes away a part of the potable water that ought to be reserved for drinking for the factories, the watering and fire hose, and the water power for lifts. Another important

cause of loss of water also is reckless waste. Finding that the tap-water in the apartment houses is not sufficiently fresh (inasmuch as the pipes, which are all situated on the outside of the houses under the police regulations, are exposed to the sun), it is a common practice, in order to obtain a glass of cold water, first to let quite a copious stream flow to waste. Many even leave the tap on all the day so as to be sure of cold water at any time. The waste from this practice is so considerable that it has been even suggested that it might be to the city's advantage to supply ice gratuitously to all the inhabitants during the hot spells. Through the nomination of M. de Selves to the Ministry of Foreign Affairs, the office of Prefect of the Seine has a new incumbent, and, as might be expected, a greater activity is just now manifest in the municipal services. The new Prefect has taken steps to lessen the deficiency of drinking-water by half. After consultation with the committee of hygiene, and particularly with Dr. Roux, director of the Pasteur Institute, he has decided to divert into the reservoirs of Paris 30,000 cubic metres daily of water from the Marne, after filtering it through three successive layers of porous stone. Moreover, at the outlet of these filters there is to be added to the water a slight quantity of sodium hypochlorite to destroy the microbes that may have escaped through the filter. Inasmuch as the water of the Marne is calcareous, the sodium hypochlorite, being promptly neutralised by the calcium salts, leaves no unpleasant taste. It is really a remarkable thing that 15 days have sufficed for making this installation and for providing against a dearth in the normal supply of drinking-water. It is true that the works for supplying water from the Marne for industrial and watering purposes and the needs of the bathing places of Paris existed, as well as the pipes that allowed the conducting of this water into the mains of the drinking-water reservoirs. Although this communication could not have been effected in so few days, the Parisians, in their delight at at last having water, forget to ask themselves if this mysterious communication has not been made use of very often, in times of drought, without its being so flamboyantly heralded as it is to-day. The interesting fact is the rapidity with which it has been possible to organise so perfect a system of purification, for which Dr. Roux and the Consultative Commission deserve great credit. It should be added that the water was not supplied to the public until after numerous bacteriological and chemical tests, and many tastings by the members of the Commission, had established the innocuousness and the potable quality of the water. It was quite time, because, to meet the drought, recourse had again been had to the deplorable measure of stopping the flow during the night to allow the reservoirs to refill. Consequently the inhabitants of Paris were entirely without water between midnight and 6 A.M., which caused considerable discomfort; for though it was possible and customary to put aside a supply of drinking-water, it was not equally so to provide for baths, the toilet, the lifts—which consequently did not work during the night—and, what was still more serious, for the fire mains. On many occasions fires broke out during the night, with disastrous results, owing to the lack of water in the mains. It is true that a watch service was organised, and that the firemen, on being summoned by telephone, immediately themselves undertook the task of reopening the water mains. But even so, a quarter of an hour or 20 minutes elapsed before the water in the mains attained an adequate pressure. During this time the fire gained a good footing, for the firemen's hose was intended to work under heavy pressure, and without it gave only a very feeble stream. One shudders now at the thought of what would have happened had a fire occurred, for instance, in a place of entertainment some minutes after midnight. The losses thus caused have already cost a sum not far short of what it would have cost to bring an additional supply of drinking-water to Paris—an expense before which the administration for several years has recoiled. The new Prefect has promised that before next summer the works now under construction for the purification of the water of the Seine by ozone and the ultra-violet rays shall be finished, and that Paris shall not again run the risk of its water-supply giving out, even in case of a drought of the sources and of reckless waste in the use. The purification of river water is, in short, the means to be adopted for supplying the city of Paris with a fresh supply of drinking-water, for the various processes are now sufficiently perfected to deserve confidence. This solution is less costly than the bringing of water at great expense from fresh sources far afield, Paris having already exhausted all the available water-supplies within a radius of 200 miles. These water sources, moreover, require incessant surveillance by chemical stations and laboratories along their course, and the imprudence of the dwellers alongside might contaminate them with typhoid germs and so risk infecting the entire capital, as has all but happened many times with regard, for instance, to the sources of the Avre. The plan of bringing water to Paris from Lake Geneva, which has been put forward, has been abandoned on account of the enormous expense and the risk that in war-time an enemy might destroy these works and threaten Paris.

August 7th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Proposed Restrictions on the Journalistic Puffing of Medicines.

AT a recent meeting of the Union of Austrian Medical Councils a suggestion was made which is of considerable interest to medical journalists. The substance of it was to the effect that something of the nature of a permanent committee should be created whose duty it would be to examine and control the articles in which some medical periodicals extol the value of certain medicines and other substances used therapeutically. In the result a resolution in this sense was adopted by the meeting, in spite of the fact that it is impossible to test the efficacy of such remedies or to verify the statements of the author of such an article otherwise than by repeating his experiments. At any rate, the incident reveals the existence of some dissatisfaction with the frequency of these puffing announcements in our medical journals. It is, no doubt, true that a medical man will be able to judge for himself how much reliance can be placed on paragraphs of that kind, but the chief objection to them is the custom of the manufacturers of proprietary medicines to distribute broadcast condensed abstracts of such articles wherein the medicine is praised, and practitioners cannot find out from a few lines whether the statements that are made are the result of honest observations or merely the production of a vivid and artificially stimulated imagination.

The Karolinen Kinderspital in Vienna.

During the year 1910 at the above-mentioned hospital, one of our special institutions devoted to the treatment of children, 18,292 children came under observation, of whom 965 were received as in-patients. Of this number 352 were under 2 years of age. The mortality of the in-patients was 15 per cent.; 13·3 per cent. were discharged as improved and 57 per cent. as recovered. A large proportion of the inmates were received because of infectious diseases. Only severe cases were admitted. The mortality of some prevalent diseases was as follows: measles, 2 per cent.; scarlet fever, 4 per cent.; and diphtheria, 8·7 per cent. This institution is one of the few hospitals in Austria supported by voluntary contributions and not under direct official control, but managed by a privately appointed council. Plans have been prepared for the erection of a new hospital, as the present premises are antiquated and insufficient both for the increasing number of patients and also for the fulfilment of modern requirements. The scientific report of the hospital contains six elaborate papers by the director, Dr. Knöpplmacher, as well as instructive contributions by Dr. Lehndorff, Dr. Zak Spieler, Dr. Leines, and several others.

A Case of Acute Bedsore after a Large Dose of Veronal and Pyramidon.

A rare case of gangrene of the skin and subcutaneous tissues, described under the name of acute bedsore, was shown recently by Dr. Liechtenstern at a meeting of the Gesellschaft für Innere Medicin in Vienna. The patient, a woman aged 28 years, had taken, with a suicidal intention, 8 grammes (a quarter of an ounce) of veronal and 6 grammes of pyramidon. She was found in an insensible condition, and when she was taken to a hospital a bluish-black spot of the size of a shilling was then noted in the region of the coccyx. After 48 hours, the unconsciousness still being present, there

was evidence of suppuration and the affected area had increased to the size of a five-shilling piece. In spite of careful treatment the gangrene spread until it reached the sacrum. The patient was treated with peroxide of hydrogen and iodine and was placed on a water-bed. This finally brought the destruction of tissue to a stop, and she was discharged from the hospital after 40 days with a defect of tissue measuring three inches in depth and about an inch in breadth. It could not be ascertained with certainty whether or not there had been a lesion of the medullary conus, for there were no bladder troubles and no loss of control of the rectum, but only changes in the sensibility of the gluteus muscles. No similar case due to poisoning by veronal has yet been seen or reported upon. Acute bedsore was sometimes met with in cases of disease of the spinal cord; it appeared and developed within a few hours, and in the case above mentioned it seemed that the mixture of veronal and pyramidon (amido-antipyrin) had exercised a toxic influence upon the lower segment of the spinal column.

Reappearance of Cholera in Austria.

In addition to the few cases of cholera mentioned in my letter in THE LANCET of June 24th there has been a definite outbreak of this disease in Trieste, where at present there are 20 cases under observation. The very strict quarantine and the careful search that has been made have resulted in the discovery that among the persons who have been in contact with undoubted cases of cholera there are several who, although to all appearance in good health, nevertheless harbour the bacillus of that disease. The intensely hot weather which at present prevails in the southern districts of Austria has also had a share in promoting the spread of infection by indiscriminate eating of fruit and assuaging of thirst, especially amongst the lower class of the population. The coast district of Austria has now been declared to be infected with cholera, and due notice of the fact has been given by the sanitary authorities to all states and governments as required by the Cholera Convention. In all cases the direct or indirect tracing of the source of infection pointed to Italy as the place of origin, except where direct contact with infected persons occurred in our country.

The Medical Sanatorium in Marienbad.

In Marienbad a few days ago the convalescent home for medical men was opened, and will no doubt prove a boon to many practitioners when suffering from the effects of illness. Residence in the institution will be free for subscribers, while non-subscribers will have to pay a small sum for their accommodation; the waters and the use of the baths of Marienbad will be free to all medical men.

August 7th.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

Care of Milk in Montreal.

Dr. McCarney, chief food inspector in Montreal, has recently made a special investigation of milk delivery in Montreal. He has submitted to the Board of Control a strong recommendation in favour of refrigerator railway cars for the conveyance of milk in hot weather. He has further recommended that cooling houses should be provided at the points of arrival to prevent the milk from souring prematurely.

Annual Report upon the Feeble-minded in Ontario.

Dr. Helen MacMurchy, in her fifth annual report upon the feeble-minded in Ontario, thus sums up the situation as regards the school population. The school population of Ontario is about 600,000, and of this number it is estimated that 1000 or so feeble-minded are in the schools or of school age. In the opinion of Dr. MacMurchy these should be registered under the direction of the Education Department, in order that they may be known and located. As for the remainder, the adults or those over school age should be reported to the Provincial Secretary's Department. Those coming under the notice of the officers of the law should be similarly tabulated. Finally, there should be a gradual development of the policy of the care of the feeble-minded, in accordance with enlightened public opinion in the province.

Accident to Dr. Andrew Macphail.

Some few weeks ago an unpleasant accident happened to Dr. Andrew Macphail, editor of the *Journal* of the Canadian Medical Association. A bottle of aerated water exploded and particles of glass lacerated his face and injured both eyes. I am assured, however, that neither eye is permanently injured.

Dr. George E. Armstrong and the Royal Victoria Hospital, Montreal.

Dr. George E. Armstrong, of the Montreal General Hospital, has been appointed surgeon to the Royal Victoria Hospital, Montreal, in the place of the late Dr. James Bell. Dr. Armstrong is President of the Canadian Medical Association.

Milk Stations and Infant Mortality in Montreal.

Dr. Lachapelle and Dr. Blackader have reported recently to the Board of Control of Montreal that during the late extremely hot weather, as a result of the work done by the milk stations in connexion with La Crèche de l'Enfant Jésus, Ste. Justin Hospital, and the dispensaries of St. Edward and Hochelaga, infant mortality in Montreal has been very considerably reduced. Several more milk stations are to be established.

July 22nd.

UNITED STATES OF AMERICA.

(FROM OUR OWN CORRESPONDENTS.)

The Cholera in New York.

EIGHT deaths from cholera have been reported to the Department of Health of New York City from the outbreak of the disease in Naples up to July 18th, six of those deaths having followed the arrival of the steamship *Moltke*. Two passengers of the steamship *Abruzzi*, which reached this port some two weeks ago, were the first victims, one dying in Auburn, N.Y., some 100 miles from New York, and the other in Brooklyn. Of the remaining six, five were passengers of the *Moltke*, and the sixth a night watchman at the detention hospital. Dr. Herman M. Biggs, chief bacteriologist of the Health Department, with Dr. Alvah H. Doty, health officer of the port, visited both Hoffman and Swinburne Islands, and reported that the colonies of detained passengers and cholera suspects on Hoffman Island, and the patients on Swinburne Island, were doing well. On July 20th Mayor Gaynor visited Hoffman Island in company with Dr. Doty, Dr. Biggs, and Assistant Surgeon-General L. E. Cofer, who represented Surgeon-General Wyman of the Public Health and Marine Hospital Service. Passed Assistant Surgeon R. H. von Esdorf, who has been in charge of the United States Marine Hospital at Mobile, Ala., and is an expert bacteriologist, has been sent to New York by the United States Government to inquire into conditions at Quarantine, and a rigid investigation is being made. It is believed, however, that there is no further danger of the infection spreading, and the public has been reassured by the official publication of facts concerning cholera, to the effect that it is introduced into the system only through infected food and drink, and is not contagious in the popular sense. It is understood that the steamship companies are taking great precautions to avoid shipping patients, and especially 'cholera carriers,' thus coöperating with both the United States and the Italian Governments to put an effectual stop to the incipient epidemic. This cholera excitement has put a complete check to the political efforts to discharge Dr. Doty in order that the political party recently victorious at the polls in New York State might put in one of its henchmen, and so secure the high emoluments of this responsible office. It is not unlikely that the result of the whole cholera scare will be to put the Quarantine Department of the State under the control of the Federal Government, where it properly belongs, all the water highways of the country being under central control.

Study of Infantile Anterior Poliomyelitis.

The Rockefeller Institute for Medical Research announces that it will devote its resources during the present season to the study of infantile paralysis and to the treatment of acute cases in its hospital. The ravages of the disease have been enormous during the past hot spell throughout the country.

Dr. Flexner has no doubt that the disease is communicated by means of the common house-fly. Physicians everywhere are requested to communicate to the institute reports of prevalence of the disease, and when possible to send by post sections of the spinal cord and naso-pharyngeal mucosa, preserved in glycerine, addressed to Dr. Simon Flexner, Sixty-sixth Street and Avenue A, New York.

A Clinic for Mental Diseases.

A clinic for mental diseases, to be open on Wednesday and Saturday mornings, and conducted under the auspices of the State Charities' Aid Association, has been inaugurated at the Long Island College Hospital, Brooklyn, New York City. It is the second of its kind in the State and the first in the city, and if successful will be followed by the establishment of similar clinics.

Infant Mortality in New York.

In the first six months of 1911 there were 7337 deaths from all causes of infants under one year of age in New York City, ten less than for the same period in 1910. The nurses of the Health Department have now under constant supervision over 11,000 infants. The seaside hospital at Coney Island, with a capacity of 184 beds, has been reopened for the summer in its new fireproof building, and will continue its very successful work in caring for invalid babies, with two internes, eight nurses, and a large visiting staff.

Travelling Luxury for the Insane.

The Long Island Railroad has put into commission a car built especially for insane patients who are to be conveyed to any of the numerous asylums on the island; the expense is borne partially by the State. It is larger than an ordinary car, being on the lines of a Pullman, is completely furnished with surgical instruments, strait-jackets and other apparatus for restraining violent patients, and the windows are protected with heavy brass grille work.

A New Treatment for Rheumatism.

Great interest has been manifested by the medical profession in the publication of a paper by Dr. Algernon Brashear Jackson of Philadelphia on the treatment of rheumatism. This treatment consists simply in the hypodermic injection of Epsom salts or magnesium sulphate in three-grain doses. The results are not only the free purgation that might be expected, but a rapid drop in the temperature and speedy relief from pain. In all the cases reported by Dr. Jackson he had previously exhibited sodium salicylate, either without result or with but slightly palliative effects. Previous literature on this treatment is practically *nil*, there being but one reference in a minor work on therapeutics, although there was at one time some slight vogue for the hypodermic use of Epsom salts for the relief of otherwise intractable constipation.

Charges against Dr. H. W. Wiley.

For a long period attempts, instigated by food and drug adulterators and manufacturers of misbranded products in America, have been made to discredit Dr. H. W. Wiley, chief of the Bureau of Chemistry of the United States Department of Agriculture, whose zeal in administering the Pure Food Act has made him extremely unpopular among these classes. These attempts have not been successful, nor have they had the effect of diminishing Dr. Wiley's zeal. By a curious coincidence, however, a committee of the Department of Agriculture has brought a series of charges against Dr. Wiley, and the Attorney-General, after examining these charges, has recommended that Dr. Wiley be allowed to resign, and has expressed the opinion that his action merits "condign punishment." The basis of the charge is that Dr. Wiley arranged to pay Dr. H. H. Rusby, a pharmacognosist of high standing, employed in connexion with the administration of the Pure Food Act, a higher salary than that allowed by law. The charge appears to be purely technical in character, and it is difficult to understand for what reason it is being pressed so relentlessly. It is known that President Taft fully approves of Dr. Wiley's strenuous administrative policy, and is, in fact, anxious that the law as to food and drug adulteration should be strengthened.[1] It will be interesting to learn the President's opinion of the technical grounds on which Dr. Wiley has been asked to resign from a position in which he has done such valuable public service.

July 24th.

[1] THE LANCET, July 8th, 1911, p. 106.

NOTES FROM SOUTH AFRICA.

(FROM OUR OWN CORRESPONDENT.)

The Medical Profession and the Union Government.

MEDICAL men throughout South Africa of all shades of political thought are profoundly dissatisfied with the methods of the first Union Ministry. Grave discontent was caused within a few days of Union by the breaking up of the old Colonial Health Departments. Although a year has since elapsed no effective substitute has been provided; nor is such apparently contemplated in the near future. A succession of unsatisfactory measures intimately affecting the medical profession were introduced into the House of Assembly, which, on being strenuously opposed by the profession, were subsequently whittled down or abandoned by the Ministry. The treatment of the Medical Council of the Orange Free State by two Members of the Cabinet still rankles. The manner of filling by General Smuts since the taking effect of Union of practically every medical vacancy of importance has given grave cause for criticism. Finally, there is the announcement of the retrenchment of Dr. A. J. Gregory and Dr. G. Pratt Yule, the medical officers of health for the Cape and Orange Free State respectively, to take effect as from August 31st next. The news of the proposed retrenchment of these officers, and particularly of the former, has been received with dismay by the profession and by local authorities. Dr. Gregory is universally considered the most suitable officer in South Africa to-day to be appointed to the post of chief medical officer of health for the Union on account of his qualifications, his long official experience and ripe knowledge of South African conditions, and of his well-known administrative powers. In view of the character of some recent appointments, it would seem as if Dr. Gregory's very fitness for the post and the fact that such is recognised by the profession are sufficient to cause him to be retired from the service under present conditions. The only reason that can be advanced in the case of Dr. Pratt Yule would appear to be because as a Government nominee on the Medical Council of the Orange Free State he had the courage to resign with his colleagues from that Council during the recent controversy with General Hertzog and General Smuts. In both cases the feeling of the profession is that no effort must be spared to deter General Smuts from carrying out his proposals. They cannot be explained on the ground of a reduced staff being necessary under the Union, for if an adequate health administration for South Africa is to be maintained, more whole time medical officers of health than are at present in the service of the Government will be required. The retrenchment of these officers is not likely to be carried out without causing much indignation from all who desire to see a healthy South Africa, and already a number of strongly-worded protests have been made to the Government on the subject by local authorities and medical societies. In the meantime it is understood that Dr. Pratt Yule has been offered and has accepted an important public health appointment in Canada.

Medical School of South Africa.

Amongst the recent arrivals in South Africa was Dr. R. B. Thomson, the newly appointed professor of anatomy at the South African College, Cape Town, and the first holder of the chair of anatomy established in South Africa. Dr. Thomson was the Crichton research scholar in anatomy in 1906–07 and again in 1907–08, and has held several teaching appointments at the Edinburgh University since he graduated in 1905, including the appointment of lecturer in anatomy with charge of the Bristo-street department of the University. He will be engaged for the next few months in superintending the organisation and equipment of the new anatomy department. The professor of physiology has not yet been appointed, but applications are now being invited for the post. The salary attaching to each of these appointments is £500 per annum, rising to £800, with a retiring pension of £300 per annum.

The Prevalence of Small-pox.

A few weeks ago over 200 cases of small-pox were discovered in the district of Herschel in the Cape Province. The cases appear to have been of a fairly mild type, and consequently the outbreak was not reported to the

authorities by the natives amongst whom it broke out. Unfortunately, it has now spread over a wide area, and judging from press reports promises to give the authorities considerable trouble in stamping it out. The disease has not only spread to other districts in the Cape Province but also to the Orange Free State and the Transvaal. The reason appears to have been the usual one—namely, a restricted expenditure on vaccination. The laws relating to vaccination in the Union—at any rate, in certain provinces of the Union—are far from satisfactory, and recently they have not been enforced. The vaccine stations in South Africa have been working under great pressure to supply sufficient lymph to meet the great demand that has arisen owing to the prevalence of the disease, and a large expenditure is being incurred all over South Africa on public vaccination. Amongst natives the disease used to be called "amaas," and was regarded by many practitioners until the beginning of the present century as a different disease from small-pox. Dr. G. Turner, when medical officer of health for Cape Colony, clearly proved that the disease is nothing but small-pox, modified possibly by racial or climatic factors. There are still a few practitioners who hold a contrary view, but the profession now recognise generally that "amaas" and small-pox are one and the same disease. It must be admitted that the disease is generally so modified in natives that its recognition by the new-comer from Europe is often a matter of difficulty. Yet those with any considerable experience of the disease as met with in South Africa have often seen slight attacks of amaas responsible for severe outbreaks of typical confluent small-pox, and cases of typical small-pox causing outbreaks of so-called "amaas." Moreover, vaccination protects against "amaas," the same as it does against small-pox, and patients recovering from "amaas" will not take when vaccinated. The real reason why doubt has ever arisen is apparently because even amongst unvaccinated natives the disease, as a rule, runs a very mild course, the usual mortality not being more than about 4 per cent., though striking examples of really severe cases are at times seen. Owing to the modification of the disease as it usually appears amongst natives in South Africa, it has been occasionally mistaken for other diseases, and one epidemic is recorded where the disease was actually reported by the district surgeon as syphilis, the true nature of the outbreak not being discovered until neighbouring districts had become infected. All health officers in South Africa to-day, as well as the profession generally, have accepted the disease as small-pox, but still occasionally even now doubts are cast by individual members of the profession on the diagnosis of particular outbreaks. To ensure the proper notification of the disease, however, by those medical men who still maintain that it is a disease other than small-pox, the Health Acts of most of the provinces require, *inter alia*, that small-pox, "amaas," and other diseases resembling small-pox shall be notified to the local authority by the medical practitioner in attendance.

Leprosy in Basutoland.

The time will soon arrive when there will be a uniform policy throughout South Africa in the dealing with leprosy. Mr. E. C. Long, the principal medical officer of that Protectorate, recently, at the invitation of the Resident Commissioner, addressed the native council on the prevalence of leprosy in Basutoland, which in recent years appears to have been making considerable headway. He proposed to the council that all lepers should be concentrated at a place chosen for the purpose, that suitable buildings should be erected, and all necessary arrangements made for providing medical and nursing attendance, more or less on the lines of the leper settlement in the Transkei. He expressed the hope that the council would advise Chief Letsie to grant a suitable tract of country which should be near the seat of a magistracy and not far from the railway. Mr. Long's address was listened to earnestly by the native chiefs in council assembled, and Chief Motsocui, in voicing their views, stated that Mr. Long was advocating a movement with which the council agreed, and that in due course they would advise the paramount chief accordingly.

The Proposed Johannesburg Research Laboratory.

It appears that it is the Witwatersrand Native Labour Association that intends to build the research laboratories at Johannesburg at a cost of £40,000, and to maintain the same at an annual cost of £10,000, and not the mining companies, as was at first believed. There is a rumour that the Government desires to transfer all its laboratory work to the new laboratory when established and to assume control of it. This would mean the closing down of all the laboratories in the provinces and would be disastrous to public health work generally, and very inconvenient to those who are engaged in private practice and who rely on bacteriological assistance furnished by the provincial laboratories. If the Witwatersrand Native Labour Association is willing to undertake the maintenance of the new laboratory it is sincerely to be hoped that the Government will not be able to obtain any measure of control over it, and that it will remain purely a research laboratory without undertaking any routine public health work whatsoever. It is desirable to prevent at all costs the research work in the new laboratory being swamped with routine work, as has been the case in the existing Government laboratories, and above all to ensure that the Government should have no say in the making of the new appointments to the laboratory staff in order that such appointments may be made on the merits of candidates and not possibly owing to political bias. Primarily it is understood that the institution is to be for the investigation of those diseases which affect particularly the health of mine workers, but also that it will be open for any research work into human diseases occurring in South Africa. If the laboratory can be established and maintained on sound lines a great future should be open for it, as remarkably little research work into human diseases peculiar to the country has hitherto been undertaken, and a vast field lies open. For instance, during the last three years there have been numerous outbreaks of an unknown infectious disease occurring amongst natives throughout South Africa, more particularly in densely populated native areas, that has hitherto defied investigation. It has been variously diagnosed as epidemic cerebro-spinal meningitis, scarlet fever, measles, influenza, enteric fever, paratyphoid, and typhus. Outbreaks of the disease have been recognised for at least the last 12 years. It appears to attack natives only, and it has occurred practically all over South Africa. It is understood that it has recently been specially studied by Dr. A. J. Gregory, the medical officer of health for the Cape, but no official report of his investigation has as yet been made public. The disease has given the authorities a great deal of trouble, and during the recent session of Parliament questions were asked in the House of Assembly regarding it. It will be unfortunate if the present investigation cannot be carried to completion, and if the retirement of Dr. Gregory should unfortunately be effected, it is to be sincerely hoped that he may be enabled to carry out his research in some other sphere of activity, as, for instance, in connexion with the proposed new Research Laboratories.

July 1st.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

The Control of Charities.

THE Acting Premier of Victoria is dissatisfied with the present system of hospital management and proposes to introduce a Bill dealing with the matter. Replying to a deputation recently he said there was at present no control worth calling control. "As all roads from charitable institutions led to the Treasury it was possible to form an idea whether the management was satisfactory or not. He wanted to preserve what was good in the present system and sweep away what was bad. What he was hopeful of doing was of creating a board of three members. They would have to be well selected or the system would fail, but with good men they ought after a year's examination of existing institutes to know which were useful and what changes were advisable."

Alfred Hospital.

This institution has been especially indicated by the Acting Premier as needing reform. Matters came to an acute crisis when the committee proposed to appoint a clinical pathologist and take a certain portion of his salary from the general hospital revenue. The Acting Premier replied that the pathologist should be paid for out of students' fees, and that if the general revenue were drawn upon for such a purpose he would cancel the Government grant in aid. The managers replied that a clinical pathologist was

as necessary to the equipment of a modern hospital as a dispensing chemist, and that in any case the students' fees were insufficient for the needs. The Premier has since agreed to modify his position, but at the same time criticised the managers sharply on some other matters.

Friendly Societies Hospital.

The Victorian friendly societies recently held a conference with the local branch of the British Medical Association as to the terms on which the latter would coöperate in the establishment of a friendly societies hospital. Dr. A. E. White, the secretary of the British Medical Association, recently conveyed the following resolutions adopted at a special meeting of the branch:—

It appeared to be the feeling of the meeting that, whilst the object of the hospital was a laudable one, it was imperative that the hospital should be open to all medical officers of the different lodges, as you will see by the following resolutions which were passed: That the hospital should be classed as an intermediate hospital, and the Association had already resolved that intermediate hospitals shall be for patients who are ineligible for public hospitals but who are unable to pay the customary fees as well as the charges usually made at private hospitals. That there shall be no medical staff, but that any medical man may send in patients and attend them. That the medical profession shall be adequately represented on the management. That no patient shall be admitted without first producing a certificate of suitability from a medical practitioner who should whenever possible be the patient's regular medical attendant. If the signatory be not the patient's usual medical attendant an explanation to that effect should be appended. There shall be no out-patients. The same maintenance charge shall be made to all patients in any one hospital. Professional fees to be arranged between the doctor and patient. Touting for patients by advertisement or otherwise shall not be permitted.

These resolutions had been approved by the Eighth Australasian Medical Congress, but in addition the following resolution (also approved by the Congress) was made a *sine qua non* as regards the present hospital proposal:—

That no medical man should pass for admission into any friendly society lodge, club, or association for professional attendance at contract rates of remuneration any person whose income from all sources, together with that of his wife (if any), exceeds £4 per week—i.e., £208 per annum. Further, no contract rates (should be available) for anyone whose income (with that of wife) exceeds £6 per week, or £312 per annum.

The friendly societies have never agreed to this stipulation and declined to consider it in connexion with their proposal for the establishment of a hospital. The negotiations have therefore fallen through for the present.

Medical Unionism.

A deputation, consisting of the Australian Medical Association and various friendly societies, waited on the Acting Chief Secretary of New South Wales in regard to an alleged boycott of the friendly societies and other medical men by the New South Wales branch of the British Medical Association. The Chief Secretary said the British Medical Association members had the same right to say they would not work with non-unionists as any other calling. However, it might be as well to inquire into the matter, and he agreed to grant a Royal Commission. The deputation asked that all members of the medical profession registered in New South Wales should be compelled to consult with one another in the interests of public health at the risk of having their names erased, and that "cliquism" in hospital appointments be abolished.

Morning "Nips."

An agitation is at present being made in Victoria for legislation compelling the early closing of hotels. Mr. Ernest Jones, Inspector-General of Insane, has given his opinion that if the hours of business are to be curtailed hotels should be closed in the morning rather than at night. He states that the ill-effects of alcohol are almost all traceable to the "early morning nip," and that if facilities in this direction were abolished there would be public benefit. The opinion is said to be strengthened by experience gained in the Government inebriate retreat at Lara, which is under the direction of the Lunacy Department.

July 7th.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH.—Hospital Saturday was recently observed in Plymouth, when collections were made for the South Devon and East Cornwall Hospital. For some years the expenditure of this institution has exceeded the income, and at the commencement of this year there was a deficit of £6709 against the hospital. In 1910 the sum of £611 was collected on Hospital Saturday, and it is hoped that this year a larger amount will be obtained.

NOTES FROM CHINA.

(FROM OUR OWN CORRESPONDENT.)

Tarabagan Disease.

NEWS has arrived in Peking of a recrudescence of marmot disease in Transbaikalia, Eastern Siberia. The details are indefinite as yet, but the latest information is that the epidemic is spreading southward towards the Chinese frontier. Dead marmots are now found as far south as Sharasun, which is only 35 miles north of the Russo-Chinese frontier. Some Chinese doctors are said to be at the frontier on the look-out and are instituting precautions, but where such a wide, sparsely populated area has to be dealt with it will be almost impossible to prevent the epidemic showing itself in Manchuria if it is at all active, as tarabagans inhabit the country all round Manchouli and the largest part of the trapping industry is conducted inside the Chinese frontier. Professor Zabolotny is on the spot investigating. It will be recalled that at the recent International Plague Conference no evidence was forthcoming which gave complete bacteriological proof that tarabagan disease was true plague. In the *Manchurian Daily News* (a Japanese paper) of July 10th there was a paragraph to the effect that Professor Zabolotny had dissected a dead tarabagan and had "found in the same animal both bubonic and pneumonic plague bacilli." In a letter to Dr. Kitasato he informs him of this, and is quoted in the Japanese papers as having said: "The presence in one living system of the germs of the two types of plague is indeed a disconcerting discovery, and has created a fresh subject of professional study." Probably there is some blunder here, as all the work hitherto done has shown that the B. pestis of pneumonic and that of bubonic plague are identical, the only differential cause being the channels of infection. It is perhaps well that this tarabagan epidemic has broken out so soon again while Professor Zabolotny and his experienced staff of assistants are still in the Far East, as the much-needed material for the elucidation of this important problem will now be forthcoming.

Chinese Medical Training: a New Scheme.

An interesting scheme is now on foot among American medical men and leaders of the American community in Shanghai. The idea is to establish a school to be known as the Harvard Medical School, and the enthusiasm already manifested should guarantee the success of the movement. A part of the arrangements has been concluded, and the first step is likely to be taken in September. The work is to be undertaken principally by Harvard University men under the superintendence of Dr. Edwards, a well-known medical educationist in the United States. Dr. Edwards, with three other members of the University, are shortly due in Shanghai to study the conditions of the task before them. They will coöperate with Dr. F. L. Hawks Pott, principal of St. John's University Medical School and his staff. The scope of this school will then be extended and a much greater number of students will be invited to join the classes. Original research work will be the principal feature of the curriculum. Some idea of the magnitude of the scheme may be gathered from the fact that contributions to the extent of $80,000 spread over a period of five years are already pledged. St. John's University has had a medical department since 1896. It is incorporated under American law. Students are required to have six years of English before they are allowed to enter on the medical course. The degree of M.D. is conferred upon graduates who have completed the five years' course and have maintained throughout the entire course a general average of 75 per cent. The South Manchurian Railway Company, which is a Japanese Government official line, superintending and running various industrial concerns and encouraging the economic development of South Manchuria, has arranged to establish a medical school at Mukden, comprising two departments—namely, pharmacology and medical science—and it is to be opened in September. The object of the school, it is said, is to lead the Chinese to the path of modern civilisation by instructing them in modern medical science and practice. The students of the school are to be recruited from Chinese young men. The company has a large well-equipped hospital at Mukden, which will be used for a time until the school has its own buildings constructed.

Peking, July 13th.

Obituary.

JOHN DUNNELL RAWLINGS, M.B. LOND., M.R.C.S. ENG., L.R.C.P. LOND.

THE death occurred on July 17th of Dr. John Dunnell Rawlings of Dorking at the untimely age of 43. Dr. Rawlings took the conjoint diploma of the Royal Colleges of Physicians of London and Surgeons of England in 1893, and in the following year the M.B. of London University. He became in succession resident medical officer to the Royal Free Hospital, house physician to St. Bartholomew's Hospital, and house physician to the Lying-in Hospital, York-road. He then entered into practice with the late Mr. Chaldecott, and on the retirement of the latter he succeeded to the entire practice, which he worked single-handed until a few months ago, when increasing work compelled him to take a partner. He was surgeon to the Dorking Hospital, and was this year President of the Reigate Division of the British Medical Association.

We add the following appreciation by a personal friend:—"Dr. Rawlings was so exactly suited to the profession he chose that it is difficult to imagine him in any other career. He had just the necessary qualities to make an admirable practitioner. He was an excellent clinical observer, and took a keen interest in all the developments of medicine. His contributions to medical literature, though few, were characterised by shrewd insight, terse, vigorous expression, and possessed the salt of humour. His personal character made of the sound medical adviser also the close friend, for he had in a high degree the genius for friendship, so that he at once commanded the confidence and respect of his patients, while the esteem in which his colleagues held him is shown by his elevation this year to the chairmanship of the Reigate Division of the South-Eastern Branch of the British Medical Association. In the midst of a busy and useful career he suddenly learned that he had but a short time to live. He faced death with unflinching courage, still considerate and anxious to help others when he knew himself to be beyond human aid. Swiftly and surely the end came, and he was laid to rest amid every token of respect and affection."

Sir Dyce Duckworth, whose house physician Dr. Rawlings was, also writes: "I am much grieved to hear of the death of my former pupil and house physician. His short and grave illness was quite tragical. I had a great regard for him. He was a very able man and availed himself of every opportunity to add to his knowledge. He formed his opinions deliberately and had a robust element of singlemindedness and straightness in his character. All his work was done carefully and he gave of his best. Nothing daunted him in doing what was right and urging what he believed to be true. I remember that some years ago he was much provoked by the anti-vaccination party in his district, and withstood with much vigour the ignorance and prejudice which they sought to propagate. He had secured a good position in Dorking and its neighbourhood, and was on the road to success which his attainments and high character richly deserved. As a good friend, and an honourable member of the profession, he will be much missed by all who knew him. R.I.P."

WESTERN HOSPITAL FOR INCIPIENT CONSUMPTION, TORQUAY.—Dr. W. Odell, who has recently resigned the post of honorary physician to the Western Hospital, Torquay, after 16 years' service, has been appointed honorary consulting physician. Dr. J. E. Paul has been elected to fill the vacancy caused by the retirement of Dr. Odell. This institution, which was founded in 1850, contains 40 beds, and performs much useful work.

COLONIAL MEDICAL SERVICES.—*West African Medical Staff:* Mr. D. T. H. Croly, medical officer, Gold Coast, has retired; Mr. P. J. Garland, C.M.G., deputy principal medical officer, Gold Coast, has retired on pension; and Dr. W. F. Roach has retired with a gratuity. The following gentlemen have been selected for appointment to the staff: Dr. A. J. M. Crichton (Northern Nigeria) and Dr. A. J. R. O'Brien (Gold Coast).—*Other Colonies and Protectorates:* Mr. R Bury has been selected for employment as a medical officer in Nyasaland.

Medical News.

ROYAL COLLEGES OF PHYSICIANS OF LONDON AND SURGEONS OF ENGLAND.—At a meeting of the Comitia of the Royal College of Physicians of London and of the Council of the Royal College of Surgeons of England, on July 27th, Diplomas of L.R.C.P. and M.R.C.S. were respectively conferred upon 97 candidates (including two ladies—Miss Collie and Miss Ricketts) who have passed the Final Examination in Medicine, Surgery, and Midwifery of the Conjoint Examining Board, and have complied with the by-laws. The following are the names of the successful candidates:—

Mohammed Affi, Cairo and London Hospital; Edward William Atkinson, B.A. Cantab., Cambridge University and London Hospital; John Horatio Baldwin, M.A. Cantab., Cambridge University and St. Bartholomew's Hospital; William Rawson Barlow, Middlesex Hospital; Frank Basford, St. Mary's Hospital; Maurice Beddow Bayly, Charing Cross Hospital; Edward Billing, B.A. Cantab., Cambridge University and Guy's Hospital; Henry George Barham Blackman, Guy's Hospital; Herbert Stuart Blackmore, L.D.S. Eng., University College Hospital; Leon Francis Brandenbourg, M.B., C.M. Madras, Madras University and King's College Hospital; Thomas Cresweil Brentnall, Manchester University; Ernest Frederick Westmore Buckell, University College Hospital; Monamy Aston Cornwall Buckell, University College Hospital; Joseph Henry Campain, Liverpool University and Guy's Hospital; Ronald George Canti, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; Frederick George Chandler, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; Arthur Ryland Chavasse, M.A., B.M., B.Ch. Oxon., Oxford University and St. Thomas's Hospital; Gilbert Charles Chubb, University College Hospital; Maysie Alice Marianne Collie, Otago University and Royal Free Hospital; *James Garfield Crawford, New Zealand University; John Hamilton Cumming, Cambridge University and St. Bartholomew's Hospital; Henry Harvard Davis, Guy's Hospital; Jyotish Chandra De, M.B. Calcutta, Calcutta University and Middlesex Hospital; Alexander Arnitt Dear, Liverpool University; Georg Dorner, M.D. Königsberg, Königsberg and Freiburg Universities; William Henry Dupré, St. Bartholomew's Hospital; Garas Girgis El-Daba, Cairo and University College Hospital; Daniel Charles Evans, University College, Cardiff, and London Hospital; Robert Noel Farrer, Leeds University; Alfred George Timbrell Fisher, Bristol University and St. Bartholomew's Hospital; Geoffrey Troughton Foster-Smith, Guy's Hospital; Percy Lempriere Gibson, B.A. Oxon., Oxford University and King's College Hospital; Vincent Glendining, Guy's Hospital; Harold Kinder Griffith, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; Harry Leroy Satterlee Griffiths, University College, Cardiff, and Guy's Hospital; John Griffiths, University College, Cardiff, and London Hospital; Henry James Hacker, St. Bartholomew's Hospital; Edwin Cecil Hardwicke, B.A. Cantab., Cambridge University and St. Mary's Hospital; Alfred Ridley Hargreaves, B.A. Cantab., Cambridge University and St. Thomas's Hospital; Leonard Austin Harwood, L.D.S. Eng., Westminster Hospital; John Rollo Hayman, Middlesex Hospital; John Eric Hepper, St. Bartholomew's Hospital; Harold Howard Hiley, Bristol University and King's College Hospital; Sydney Francis Huth and Charles Eric Sweeting Jackson, St. Mary's Hospital; Tiruvallur Katakam Jayaramulu, Madras and Edinburgh Universities and Middlesex Hospital; John Cecil Jefferson, Manchester University; Stanley Gower Johnson, Middlesex Hospital; Rupert Llewellyn Jones, London Hospital; Hugh Percival Joseph, L.M. & S. Ceylon, Ceylon Medical College and Middlesex Hospital; Anthony Kennedy, B.A. Cantab., Cambridge University and Middlesex Hospital; Alfred Bertie Kramer, Edinburgh University, University College and London Hospitals; Edward Claude Linton, London Hospital; Frederic George Lloyd, Guy's Hospital; Richard Hugh McGillycuddy, University College Hospital; Reginald Kinlock MacGregor, St. Bartholomew's Hospital; Quintus Madge, B.A. Cantab., Cambridge and Liverpool Universities; Geoffrey Marshall, Guy's Hospital; Valentyne Cleeve Martyn, St. Mary's Hospital; Mendel Mayers, London Hospital; James Menzies, St. Mary's Hospital; Clement Treves Neve, St. Bartholomew's Hospital; John Herbert Owens, London Hospital; Chandrashekhar Damodar Pande, Bombay University and Middlesex Hospital; Cecil Joseph Herbert Pearson, London Hospital; George Reynolds Peterson, M.D., C.M. McGill, McGill University and St. Bartholomew's Hospital; Vivian St. Leger Pinnock, Bristol University and University College Hospital; Arthur Thomas Pitts, Middlesex Hospital; James Potter, London Hospital; *Walter Woodall Pratt, Bristol University; Cecil Walpole Preston-Hillary, Guy's and Middlesex Hospitals; Robert Anstruther Ramsay, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; Rachel Ricketts, Calcutta University and Royal Free Hospital; Christopher Hugh Leete Rixon, St. Thomas's Hospital; Hermann Melchior Robertson, M.D., C.M. McGill, McGill University and London Hospital; Frederic Gardiner Rose, B.A. Cantab., Cambridge University and St. Thomas's Hospital; Stewart Henry Rouquette, B.A. Cantab., Cambridge University and St. Thomas's Hospital; Lionel Walter Kennedy Scargill, Cambridge University and St. George's Hospital; Edward Gustave Schlesinger, B.Sc. Lond., Guy's Hospital; Emanuel Prinski Scott, London Hospital; Arthur Ashton Smalley, M.B., Ch.B. Manch., Manchester University; Reginald Gershom Sparkes, St. Mary's Hospital; John Richard Cook Stephens, London Hospital; William Steuart, St. Bartholomew's Hospital; Alan Murray Stuart, St. Mary's Hospital; Cecil Hearle Symons, Charing Cross Hospital; Frederick John Thorne, B.A. Cantab., Cambridge University and Middlesex Hospital; John St. Andrew Titmas, L.D.S. Eng., Middlesex Hospital; Francis Richard Todd,

St. Bartholomew's Hospital; John Reginald Arthur Digby Todhunter, B.A. Cantab., Cambridge University and St. Thomas's Hospital; Bernard Thomas Verver, Guy's Hospital; Maximilian Christian Wall, Guy's Hospital; Rowland Ward, Leeds University; John Robert Douglas Webb, Liverpool University; Arthur White, St. Thomas's Hospital; Owen Elias Williams, Guy's Hospital; and Matthew May Woods, Cambridge University and St. George's Hospital.

* Diploma of M.R.C.S. granted on July 13th, last.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Diplomas in Public Health were conferred (in conjunction with the Royal College of Physicians of London) upon the undermentioned 20 gentlemen:—

David Main Baillie, M.B., Ch.B. Aberd., Aberdeen University and University College; Samuel Lindsay Brohier, L.R.C.P., M.R.C.S., Ceylon and Middlesex Hospital; John Philip Henry Davies, B.C. Cantab., L.R.C.P., M.R.C.S., Cambridge University and St. Bartholomew's Hospital; Reginald Inglis Douglas, M.B., B.S. Durh., L.R.C.P., M.R.C.S., St. Bartholomew's Hospital; William Henry Wilson Elliot (Lieutenant-Colonel I.M.S., D.S.O.), M.B. Lond., M.R.C.S., L.S.A., Guy's Hospital; William Charles Dillon Hills, L.R.C.P., M.R.C.S., University College; James Bonnell Howell, L.R.C.P., M.R.C.S., University College; John Johnstone Jervis, M.B., Ch.B. Edin., Edinburgh University and University College; Robert Henry Hatten Jolly, M.B., B.S. Lond., L.R.C.P., M.R.C.S., Charing Cross Hospital and University College; Thomas McCririck, M.B., Ch.B. Glasg., Glasgow University and King's College; John McKenzie (Captain R.A.M.C.), M.B., B.Ch. Aberd., Aberdeen University; Bernard Moiser, M.B. Lond., L.R.C.P., M.R.C.S., University College; Henry Pratt Newsholme, M.B., B.Ch. Oxon., M.R.C.P., Oxford University and St. Thomas's Hospital and University College; Jitendra Nath Rai, L.R.C.P. & S. Edin., L.F.P.S. Glasg., Edinburgh and University College; Bikrama Jit Sahni, L.R.C.P. & S. Edin., L.F.P.S. Glasg., Edinburgh and University College; Percy Herbert Stirk, L.R.C.P., M.R.C.S., University College; William Reginald Margetts Turtle, M.B., B.S. Lond., L.R.C.P., M.R.C.S., University College; Ernest Alfred Freear Wilkes, L.R.C.P., M.R.C.S., University College; Frederic C. Wood, L.M.S.S.A., London Hospital and University College; and William Allan Young, M.B., Ch.B. Edin., Edinburgh and Cambridge Universities and University College.

The Licence in Dental Surgery was conferred upon Oliver Beale Townshend of Guy's Hospital Dental School, who has now complied with all the necessary by-laws of the College.

VICTORIA UNIVERSITY OF MANCHESTER.—On July 28th the following degrees in Medicine, Surgery, and Dental Surgery were conferred:—

M.D.—Roland Hereward Titcombe (awarded gold medal); Herbert Evelyn Allanson, James Randal Hutchinson, Peter Moran, Herbert Tomlin, Henry Whitehead, and John Stirling Young (thesis commended); William Edward Bamber, George Herbert Brown, Harry Howard Bywater, James Frederick Corson, George Hamer Leigh, James Wood, Martin Stanley Wood, and Ambrose Edgar Woodall.

M.S.—John Morley.

B.M., B.S.—Arthur Hillyard Holmes, William Henry Kauntze, Jane Craig Miller, Sidney Pertram Radley, and John Sebastian Bach Stopford (second class honours); Charles Edward Butterworth, Norman Duggan, Alan Willis Gaye, Harold Heathcote, Mabel Eliza May, Manfred Moritz, Lovel Moss, George Ernest Sawdon, James Bethune Scott, William Stirling, and George Kenworthy Thompson.

B.D.S.—Arthur Cyril William Hutchinson.

ASSOCIATION INTERNATIONALE D'UROLOGIE.—The Second Triennial Congress of this association was held in London from July 24th to 28th. On the evening of the 24th a reception was held by Mr. E. Hurry Fenwick, President of the Congress, and Mrs. Fenwick at Princes' Gallery, Piccadilly, which was largely attended by members and their friends. At the first meeting on the 25th opening addresses were given by Professor Israël of Berlin, vice-president of the association, Professor Pousson of Bordeaux, also vice-president of the association, and Mr. Hurry Fenwick. The first scientific meeting followed immediately after the opening meeting, the question on the order of the day being Phosphaturia and Oxaluria. The discussion was opened by Dr. Hogge of Liège, Professor Richter of Berlin, and Professor Teissier of Lyons. On the 26th the question on the order of the day was Remote Results of Prostatectomy. The speakers opening this discussion were Dr. Hugh Young of Baltimore, U.S.A., Professor Robert Proust, Paris, Dr. Regino Gonzales, Mexico, and Professor O Zuckerkandl of Vienna. So much interest was taken in this subject that a second meeting was called later in the day to continue and finish the discussion. In the evening a banquet was given at the Savoy Hotel by the members of the British section to the foreign members and their friends, at which more than 200 were present. On the 27th the general assembly of the association was held in the morning, at which it was decided that the next Congress should be held in Berlin, under the presidency of Professor Israël, who appointed Professor Posner of Berlin as general secretary of that Congress. The question on the order of the day was then discussed—viz., Extensive Resections of the Bladder. The discussion was opened by Mr. Hurry Fenwick, Dr. D. Giordano of Venice, and Professor Thorkild Rovsing of Copenhagen. On the 28th the members of the Congress were received at the following hospitals: St. Bartholomew's, the London, Guy's, St. Thomas's, and St. Peter's. Throughout the duration of the Congress visits were paid to various hospitals and places of interest. From the scientific point of view the Congress proved extremely successful, as the discussions were well attended and the papers of a high standard.

THE GRAND PRIORY OF THE ORDER OF THE HOSPITAL OF ST. JOHN OF JERUSALEM IN ENGLAND.—The King has sanctioned the following appointments—To be Knights of Grace: The Hon. Surgeon-General Charles Pardey Lukis, C.S.I., Surgeon Lieutenant-Colonel Sir Warren Roland Crooke-Lawless, C.I.E., and Mr. David Charles Lloyd Owen, F.R.C.S.I. (from Esquire). To be Esquires: Mr. John Horatio Yolland, M.R.C.S., L.S.A. (from Honorary Associate), Major Gilbert Stewart Crawford, R.A.M.C. (from Honorary Associate), and Dr. Thomas Gibson.

NORTH DEVON INFIRMARY, BARNSTAPLE.—At the annual meeting of the supporters of the North Devon Infirmary, which was held on July 25th, the honorary medical staff advised that one of their members should be appointed honorary pathologist to the institution. Dr. Frank Leslie Thomas was elected to the post. "The Ladies' Association" has collected £10 for a microscope, and the necessary apparatus for bacteriological work has been purchased by the committee of the infirmary.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The National Insurance Bill.

As was stated last week, the House of Commons on Wednesday, August 2nd, proceeded with the discussion on Clause 14 of the National Insurance Bill. This clause deals with the administration of medical benefit, and on it arose several of the points which have agitated the medical profession since the Bill was introduced. The text of the actu l amendments made in the clause was published last week. The effect of those changes is that the proposed income limit of £2 a week has been rejected in favour of local arrangements with the Local Health Committees, combined with an accumulation of the medical benefits of persons having incomes above the local limit. These accumulations are in the first place the source from which payment for medical attendance is secured. Then another amendment gave free choice of doctors drawn from a local panel. A third amendment safeguarded the position of existing medical institutes of Friendly Societies, but a proposal to impose a minimum per capita payment of 8*s.* 6*d.* was negatived. Another change in the clause gave free choice of chemists and druggists on the same principle as the free choice of medical men.

The whole sitting was occupied by a discussion on these changes, and it is only possible to note the leading speeches and features of the debate. Sir PHILIP MAGNUS began the discussion by moving an amendment to exclude from medical benefits persons whose incomes from all sources exceeded £104 a year. The arguments with which he supported his contention were familiar, as they touched upon the various points which had been discussed in medical circles for the last two or three months.

Mr. LLOYD GEORGE made a speech rejecting the idea of finding a solution for the various problems on the lines suggested by Sir PHILIP MAGNUS. The Chancellor of the Exchequer regarded the income limit of £2 a week as rigid and artificial and inapplicable to both town and country. The amendment would deprive people who were earning over £2 a week of the services of the medical man on contract terms. He pointed out that in a district where it was the position that the medical practice was a contract practice, and where the men earned, especially in good times, over £2 a week, they would be deprived of these benefits. He quoted from a report of the British Medical Association in which a medical man from the Durham district said: "I am almost convinced that private practice would be a failure among miners. There would be no getting one's bills paid, and as there is a considerable floating population among them—say, 10 to 15 per cent.—the loss on bad debts from this cause alone would be considerable." That doctor protested against an amendment of this kind. The right honourable gentleman went on to point out that the £2 limit would not be of the slightest use to medical men in country districts, where the man who earned £2 a week was a very exceptional person. In these districts men earning 25*s.* or

30s. a week were paying their medical men on the fee system. The amendment gave no protection at all to the medical men in these districts. A pound a week in one district might be as much as 30s. a week in another district. The £2 a week was a perfectly artificial limit and did not represent anything like the merits of the case. Was it not very much better to leave the adjustment of the income limit to the Local Health Committees, and to say that in these districts where men had been in the habit of paying fees to doctors they could do so in the future where the income was, say, 25s. a week? There was a sort of rough-and-ready line which might be created by the medical profession and the County Health Committee and the representative of the Friendly Societies. What would happen under that arrangement would be that with regard to a class of the population there would be the guarantee of the Health Committees that the medical men would be paid. He contended that medical men would be better off for the simple reason that now they were losing heavily upon the lower-wage people of the country. A medical man in the country hardly ever refused to attend a man. He did not know of a case of refusal, though there might be cases where a man had run up bills until at last the patience of the doctor had been exhausted. A doctor had sometimes 40 per cent. of bad debts, but under the new proposals the country practitioner would get 6s. or 4s. or 5s. in respect of that class of the population. If the amendment of the Member for Hoxton (Dr. ADDISON) were carried there would not be a limit imposed. But a rough-and-ready line which would be agreed upon between the practitioners and the Public Health Committee would be enforced. In this case the medical man would say, "We decline to attend people of that kind except upon the old system"—the 5s. or 6s. would be accumulated to the credit of the person. Thus, if a man who was ill paid his doctor's fees he could draw upon the reserve which was placed to his credit in the Friendly Society. The man might roll up his benefit for years, and then he could draw on the reserve to pay the medical man. There was a personal advantage in this. Many medical men would not take contract work on any terms, and if a man who was insured wanted to be attended by such a medical man an arrangement could be come to. The man would say: "I do not want you to work on contract terms; I only want you to be on the panel so as to enable me to draw on the medical reserves on the books of the Commissioners for the purpose of paying your bill." That arrangement could be adopted with advantage. He suggested to those who had the interests of the doctors and of the national health at heart that it was better to have an elastic system of that kind than to have a sort of attempt to fix a rigid income limit. It would certainly be better in the rural districts where this £2 limit would not be worth the paper on which it was printed. On the other hand, a free, open, and elastic system would work admirably. There were thousands of medical practitioners who drew the bulk of their patients from men who earned 25s., 30s., or 35s. a week. An elastic system would enable the doctor to carry on his present practice; it would enable him to get his bills paid because there would be something to assist the workman to pay; and it would also enable the workman to secure the services of his present medical adviser, even although the medical adviser refused to act on contract terms. He therefore thought it would be better if the Committee would proceed to the amendment of the honourable Member for Hoxton, because that met the realities of the case, and did not attempt to fix an artificial limit which suited neither the doctor nor the patient, and which certainly was not in the interests of national health.

Several speakers strongly supported the contentions put forward by Sir PHILIP MAGNUS. Sir ROBERT FINLAY, who sits for Edinburgh University, stated that on the point of an income limit the medical profession was absolutely united. He emphasised the strong feeling in the medical profession against the contract system. There was a very strong feeling that it was bad in its effect alike on the doctor and on the patient, and a great many medical men would not take contract prices. It was perfectly plain that the Bill was introduced without sufficient inquiries from those qualified to give information as to the conditions which actually attended medical practice. He therefore hoped that the Chancellor of the Exchequer would reconsider his position and accept the amendment, to be supplemented by discretionary power in the districts to which the right honourable gentleman had said the amendment was inapplicable. Sir HENRY CRAIK also made a protest against the attitude of the Chancellor of the Exchequer, and considered that the Bill without the amendment would have a very injurious effect upon medical practice. Mr. BOYTON, who spoke as the Parliamentary representative of something like 1000 medical men, said that the profession was entirely in favour of the amendment. However, when the amendment was put a division was not pressed and it was allowed to be negatived.

Mr. LLOYD GEORGE then moved his amendment to provide for a free choice of doctor. As was stated last week, it sets forth a scheme for the formation of a panel of medical practitioners who are willing to give treatment to insured persons, and a right is given to the insured person to choose any practitioner on the list. This proposal of the Chancellor of the Exchequer received some criticism on points of detail, but it was unanimously accepted and embodied in the clause.

Dr. ADDISON's amendment was then discussed. It was to the effect that the medical benefits of insured persons enjoying an income above a certain limit to be fixed locally by the Health Committees should be accumulated for them, and when they required medical attendance their accumulations should go towards the payment of the medical man's fees. The amendment further permitted similar arrangements to be made by insured persons who came within the income limit, but desired to make their own arrangement for medical attendance and treatment. Dr. ADDISON said that in putting forward this amendment he had no intention of putting forward some special plea for the medical profession. Some Members seemed to suggest that the medical Members in the House were exalting the medical profession—"dictating" to the House. Against that he would enter a very respectful and modest protest. However, he would sincerely hope that the House would credit them with the sincere intention to have the medical service placed on a sound footing. He had no desire that the medical profession should be placed in an unduly privileged position. Doctors up and down the country quite unnecessarily said that they would be ruined by the Bill. These representations had often arisen owing to their not quite understanding it. They had overlooked the fact that they would be paid for people who were well and that they would have no bad debts. They had overlooked the fact that many families would not really be dependents of insured persons, and that they would be entitled to charge for these as hitherto. A great deal of the alarm, he believed, was unwarranted, but still a certain amount of the alarm was quite real. It might be unfounded, but it was genuine. The principle laid down by his amendment was local option, and it was very much preferable to the definite statutory limit. A number of medical men practising under quite different conditions in different districts might have a number of private patients who became insured persons. He thought that the people should be consulted and an opportunity given to those who had been private patients, so that under a satisfactory arrangement they might have their wish to continue on the same lines. The principle was that those who had hitherto been private patients under a satisfactory arrangement should still be accepted if they wished to continue on the same lines. There was another important consideration which had not yet been pointed out. If a number of persons in any place continued to pay fees under arrangement, the demand for higher capitation payment for those of lower means would of course be correspondingly diminished. If this payment could be reasonably called upon by fees which were not on a universal scale, there was not the same necessity for asking for a high capitation rate for the lower classes. An arrangement of that kind would be a great advantage. His amendment allowed for conditions of diverse arrangements. Did the Committee think that the present arrangement would introduce elasticity into the whole system? The thing was experimental, and he thought it would be quite a mistake if the Committee straight away laid down hard-and-fast lines. The amendment would leave it open to evolve a satisfactory system both of work and pay. It was applicable to the whole country, and he believed that it would conduce to the smooth working of the whole if the Committee were to accept it now. He would ask those honourable Members who, he believed, were somewhat inclined to oppose some of the principles laid down, to refrain from doing so as far as they conscientiously could, because after all he felt that in the course of a few years there would be evolved an equitable system of contract throughout the country generally. The experience of contract practice had been used with some misunderstanding. He did not think that the whole medical profession was against a contract. It depended upon the terms of the contract. The amendment would apply equally to the rural districts of Yorkshire and elsewhere and the crowded parts of London. It would provide a basis for gradually working out an equitable system.

The general discussion on the principle involved in the amendment had taken place on the proposal of Sir PHILIP MAGNUS, when the Chancellor of the Exchequer had indicated his preference for Dr. ADDISON'S method of dealing with the situation. A few speakers made very brief comments on the amendment. A division took place on it, but it was carried by 279 votes to 41. Amongst those who voted for the amendment were Mr. LLOYD GEORGE, Dr. ADDISON, Sir HENRY CRAIK, Dr. ESMONDE, Sir ROBERT FINLAY, Dr. HILLIER, and Sir PHILIP MAGNUS. The Government Whips acted as tellers for the amendment.

About an hour's debate took place on Mr. CECIL HARMSWORTH'S amendment to safeguard the interests of the medical institutes which have been established by Friendly Societies in great towns. The terms of the amendment were indicated last week. This amendment was accepted without a division. There was no opposition to Mr. GLYN-JONES'S proposal to give a free choice of pharmacists to insured persons. He proposed that there should be a panel of pharmacists in a district composed in the same method as the panel of medical men, and a patient having obtained a prescription from a medical man might take it to any pharmacist on the panel to have it dispensed. This proposal was accepted. There was a good deal of discussion in regard to the sharing of excess expenditure on account of medical benefit by the Treasury and local authorities, but the point at issue was financial rather than medical.

Before the clause as amended was submitted to the Committee for

approval, Dr. ESMONDE brought forward a proposal to insert a new subsection to the effect "that no Health Committee shall contract with any medical practitioner for a less fee than eight shillings and sixpence per insured person per year." The honourable Member contended that insured persons should be secured against any attempt to employ medical men at a remuneration which did not afford them an opportunity of giving their very best attention to the patient. A capitation grant of 6*s.* was quite inadequate. Dr. ESMONDE proposed 8*s.* 6*d.* because the sum was already paid by a Government department. He did not see how honourable Members could logically expect medical men to give their best attention for less. Mr. LLOYD GEORGE'S attitude to this amendment was hostile. He said that Dr. ESMONDE was making a demand which the medical profession had not made before. There were at present many rural districts where the amount of the capitation payment was 2*s.* 6*d.* He thought that was unreasonable, but the honourable Member asked that it should be instantly raised to 8*s.* 6*d.* A committee of the British Medical Association had made an investigation and out of all the suggestions received only about thirty ventured as high as the honourable Member. The vast majority asked for a sum of 6*s.* or under. The case of the Post Office precedent was cited by the honourable Member, but it was very different from the one presented by the Bill. These provisions had to be made for one or two men in a rural district, and naturally the minimum was higher than if it had applied to a few hundred patients in the district. The Chancellor of the Exchequer expressed a hope that there would be no attempt to fix an amount of remuneration which might very well in some districts be higher and in some districts lower. In his attempt to fix a minimum of 8*s.* 6*d.* the honourable gentleman never seemed to give a thought to the benefit of the workmen themselves. If 8*s.* 6*d.* was given as a minimum to the medical man he must get it at the expense of the benefits of the workmen themselves. After some discussion Dr. ESMONDE'S amendment was negatived without a division, and Clause 14 as amended was agreed to.

Clause 15, which relates to the administration of sanatorium benefit, was also passed, but some amendments consequential on other changes in the Bill were made in it.

On Friday, August 4th, Clause 16 (administration of maternity benefit) was considered, and two questions of particular medical interest were raised. As the result of a discussion, it was decided to insert in the clause a provision to the effect that the mother should decide whether she should be attended by a registered medical practitioner or by a duly certified midwife, and should have free choice in the selection of such practitioner or midwife. Sir ALFRED MOND, when the amended clause was under review, asked whether when the midwife required the aid of a medical practitioner there was any fund out of which to pay the latter. The point was one of substance, especially in view of the duties imposed on the midwife by the Midwives Act in these cases. Mr. J. W. HILLS also enforced this point. Mr. MCKENNA, on behalf of the Government, acknowledged that the question was material and promised to give it consideration before the report stage. Clause 16 was then passed. Clause 17 gives power to approved societies to subscribe to hospitals, and some drafting and consequential amendments were embodied in it before it was passed.

When it finished the consideration of Clause 17 the House of Commons concluded that part of the National Insurance Bill which deals with the administration of benefits. It does not seem probable that further progress will be made with the Bill until the autumn session, which will begin in October. Thirteen sittings in Committee have now been devoted to the measure, and if the rate of progress has been slower than the Government desired, it is also the case that some of the difficulties have been surmounted with greater ease than was anticipated. Clause 14, which raised in its acutest shape the controversy with the medical profession, was passed in a single sitting, many of the amendments of which notice had been given not being moved. This, however, would have been impossible had there been a rigid adherence to the original terms of the clause. The vesting of the administration of medical benefit in the Health Committees to the exclusion of the approved societies, the granting of free choice of medical men to insured persons, and the acceptance of Dr. ADDISON'S amendment smoothed the way for the passing of the clause. Ample time for review of its provisions will be given before the report stage is reached. Owing to the two months' holiday which the House of Commons is going to take, it will be November or December before the House will be able to review its present decisions with regard to the medical profession in the light of the matured criticisms on the clauses in their new form.

Asylum Officers (Employment, Superannuation, and Pensions) Bill.

The Asylum Officers (Employment, Superannuation, and Pensions) Bill has been re-shaped by a Select Committee of the House of Commons. The original Bill proposed a 60-hours week exclusive of meal times for officers and servants in asylums. The amended Bill would impose on the visiting committees of asylums the duties of framing a scheme prescribing the hours of duty for nurses and attendants, and other conditions of service. The 60-hours week was discarded in favour of 140 hours per fortnight for day staffs and 120 hours per fortnight for night staffs. In the amended Bill the committee decided that 25 years' service, irrespective of age, was to entitle female officers and servants to a superannuation allowance. A clause permitting gratuities to them when they retired after ten years' service was embodied in the Bill. The clause forbidding the visiting committee to delegate its powers of dismissal in certain cases was redrafted. The Committee has issued a special report dealing with the changes which have been introduced into the Bill.

HOUSE OF COMMONS.

THURSDAY, AUGUST 3RD.

Calf Lymph.

Mr. C. DUNCAN asked the President of the Local Government Board whether the calves that were used for providing lymph for vaccination purposes were afterwards sold as veal; if so whether he could see his way to put an end to such a practice; and, if not, what became of these animals after they were no longer used for lymph.—Mr. BURNS said in reply: After slaughter each calf is carefully examined by a veterinary surgeon and the veal from those animals which are found to be free from disease is sold. There is no reason to doubt that such veal is perfectly wholesome.

Mr. C. DUNCAN: What proportion of the calves is not sold for human food?—Mr. BURNS: I could not say.

Mr. C. DUNCAN also asked the right honourable gentleman whether, since the Royal Commission on Tuberculosis had reported that bovine tuberculosis was communicable to human beings as well as animals, he would say whether any, and, if any, what, precautions were taken to prevent the danger that cancer and consumption might spread by vaccination with calf lymph, seeing that the calves used were inoculated from other calves, and any one in the series might therefore transmit the germs of tuberculosis.—Mr. BURNS replied: Each calf after vaccination and abstraction of the lymph from the vesicles is sent to be slaughtered and is then carefully examined by a veterinary surgeon. The lymph is not issued for use unless the veterinary surgeon certifies that the calf was free from disease. In addition to this primary precaution, there is the further fact that the lymph is glycerinated, and it has been proved by the experimental addition of tubercle bacilli to vaccine lymph that the glycerine destroys such tubercle bacilli. Before issue all lymph is bacteriologically examined and tested. There is no evidence whatever pointing to the possibility that cancer—a disease chiefly of late adult life—can be spread by vaccination.

Deaf-mutes.

Dr. CHAPPLE asked the Secretary of State for the Home Department what were the numbers of deaf-mutes in the United Kingdom at present supported by State or charitable funds; whether these numbers had been increasing; what percentage exhibited hereditary transmission of their defect; and whether, in view of the frequent celebrations of the marriage of deaf-mutes, he would cause these statistics to be sent to all authorities and guardians connected with deaf and dumb institutions.—Mr. CHURCHILL answered: Figures relating to deaf children of school age will be found in Part I. of the volume of statistics of public education. I have no information as to the number supported from charitable funds. It should be borne in mind that if there be any increase in the figures it is likely to be due to greater care in dealing with all proper cases and not necessarily to an increase in the number of deaf and dumb children. The Census returns from 1851 to 1901 show a continuous decrease in the number of deaf and dumb proportionately to the population, and I think it would be well to wait for the new Census figures before considering whether any action is required.

Local Government Board Administration.

On the vote for salaries and expenses of the Local Government Board in Committee of Supply,

Mr. PETO called attention to the grievances of vaccination officers whose remuneration had been diminished owing to the increased number of exemptions from vaccination that had taken place under the legislation of recent years.

Mr. BUTCHER, in supporting the appeal for the remedy of the grievances of these officers, mentioned that in 1907 there were 651,000 successful vaccinations in England and Wales. In 1909 they had gone down to 547,000, so that it was obvious that these men were suffering a serious reduction of income.

Mr. CHAPLIN regarded the administration of the Vaccination Act under the present system as a discouragement of vaccination. It was a very serious thing when year after year the claims for exemption were increasing to such an extent that if they continued in the present ratio for another 10 or 15 years the exemptions would be the rule, and the vaccinated children would be only the exceptions.

Mr. BURNS replied that last year there were 1420 vaccination officers, but only 400 of them gave their whole time to the work. Between 1907 and 1911, mainly at the instigation of the Local Government Board, gratuities had been sanctioned to 321 vaccination officers, increased fees had been given to 279, and in 13 other cases compensation of some form or another had been given. The Local Government Board, instead of looking at the vaccination officer's grievances with a cold eye and a lack of generosity, had helped, either through gratuities, increased fees, or in some other form of compensation, in 623 cases out of the 1020 cases which were paid by fees. Vaccination officers were not the servants of the Local Government Board. However, if further persuasion of the guardians was not productive of fair treatment in a certain small number of cases the Local Government Board would consider what steps would be necessary to secure reasonable treatment for the vaccination officers. As to the suggestion to remunerate them all by salary, he could not ask the guardians to give a fixed salary for a very small amount of work in certain instances. The Local Government Board would look into the matter in a fair and broad spirit with a view to remedying the gross grievance from which a few suffered and with a view to adopt a standard of remuneration which was fair and reasonable and to which these public officers were entitled. Speaking later on the administration of the Housing and Town Planning Act, the right honourable gentleman mentioned that in 1910–11 1046 local authorities issued closing orders with regard to 2678 houses, as against 587 orders two years previously. That, he thought, was satisfactory. The right honourable gentleman also expressed satisfaction with the progress which town planning had made in the last two years.

MONDAY, AUGUST 7TH.

Sleeping Sickness in Nyasaland.

Mr. LLOYD asked the Secretary of State for the Colonies whether cases of sleeping sickness had recently been reported in Angoniland, on the south-western arm of Lake Nyasa, in proximity to the Government game reserve; whether 22 cases had occurred in the last six months in the Protectorate; and, if so, what special measures had been and were being taken to safeguard Nyasaland.—Mr. L. HARCOURT replied: Three cases of sleeping sickness have recently been reported on the south-western arms of Lake Nyasa, in proximity to the Government game reserve. Fresh cases are being continually discovered, and I am unable to give the exact number for the last six months, but 54 cases in all have been reported to me. An account of the measures which are being taken will be found in the Sleeping Sickness Diary of the Protectorate, Part XIV. The honourable Member is probably aware that I have sent to Nyasaland a well-equipped scientific expedition, under the leadership of the distinguished expert Sir David Bruce and the general direction of the Royal Society, to investigate the relation between the African fauna and the trypanosome diseases of men and animals. Some of the members of the Commission have already sailed, and the rest will follow in about three months when the laboratory and dwelling houses will be approaching completion.

The Prevention of Anthrax.

Mr. C. BATHURST asked the Parliamentary Secretary to the Board of Agriculture whether, in view of the recent increase of anthrax throughout Great Britain, and the universally accepted theory that the main source of infection was the association of animal foodstuffs with hides, skins, wool, horsehair, mohair, rags, and other like materials prior to importation, the Board had considered the efficacy and desirability of insisting upon such articles being effectively sterilised at the port of their shipment by some process which would cause no injury to the material or fabric; whether the Board's scientific advisers had in this connexion considered the efficacy of the process advocated by Mr. Alfred Seymour-Jones, of Wrexham, of treating such materials with formic acid and mercuric chloride, and the recent report on the subject submitted by Dr. Constant W. Ponder to the Leathersellers Company of London; and, if so, with what result.—Sir E. STRACHEY answered: The reply to the first and second parts of the question is in the affirmative. The Board do not consider that the investigations made with regard to the process are sufficiently complete to justify the Board in advocating its adoption, but the matter will be kept in view.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, TINDALL, AND COX, London.

Operative Midwifery. A Guide to the Difficulties and Complications of Midwifery Practice. By J. M. Munro Kerr, M.D., C.M. Glasg., Fellow of the Royal Faculty of Physicians and Surgeons, Glasgow. Second edition. Price 21*s.* net.

Manual of Toxicology. By R. A. Witthaus, A.M., M.D., Professor of Chemistry, Toxicology, and Medical Jurisprudence in Cornell University. Reprinted from Witthaus' and Becker's Medical Jurisprudence, Forensic Medicine, and Toxicology. Second edition. Price 30*s.* net.

The Errors of Accommodation and Refraction of the Eye and their Treatment. A Handbook for Students. By Ernest Clarke, F.R.C.S. Eng., M.D., B.S. Lond. Third edition. Price 5*s.* net.

CASSELL AND COMPANY, LIMITED, London, New York, Toronto, and Melbourne.

Diseases of the Nose and Throat, comprising Affections of the Trachea and Œsophagus. A Text-book for Students and Practitioners. By StClair Thomson, M.D., F.R.C.P. Lond., F.R.C.S. Eng. Price 25*s.* net.

CLARENDON PRESS, Oxford.

The King's Evil. By Raymond Crawfurd, M.A., M.D. Oxon., F.R.C.P., Fellow of King's College, London. Price 8*s.* 6*d.* net.

FIFIELD, A. C., 13, Clifford's Inn, London, E.C. ANGUS AND ROBERTSON, LIMITED, Sydney, Australia.

Racial Decay: A Compilation of Evidence from World Sources. By Octavius Charles Beale, a Royal Commissioner of the Commonwealth of Australia, 1907, and of the State of New South Wales, 1903. Price 5*s.* net.

GREEN, WILLIAM, AND SONS, Edinburgh.

Quinquennium of Medicine and Surgery, 1906 to 1910. Edited by J. W. Ballantyne, M.D., F.R.C.P.E. Price 10*s.* 6*d.* net.

KELLY AND WALSH, LIMITED, Singapore, and at Shanghai, Hong-Kong, and Yokohama.

Studies from the Institute for Medical Research, Federated Malay States. No. 12. The Etiology of Beri-beri. By Henry Fraser, M.D. Aberd., Director, Institute for Medical Research, and A. T. Stanton, M.D. Tor., Bacteriologist, Institute for Medical Research. 1911. Price 7*s.*

KING, P. S., AND SON, Orchard House, Westminster, London. THE WORLD'S PEACE FOUNDATION, 29A, Beacon-street, Boston, U.S.A.

Papers on Inter-Racial Problems communicated to the First Universal Races Congress, held at the University of London, July 26th-29th, 1911. Edited, for the Congress Executive, by G. Spiller, Hon. Organiser of the Congress. Price 7*s.* 6*d.* net.

LAURIE, T. WERNER, Clifford's Inn, London.

Off the Main Track. By Stanley Portal Hyatt, Author of "The Diary of a Soldier of Fortune." Price 12*s.* 6*d.* net.

LONGMANS, GREEN, AND CO., London, New York, Bombay, and Calcutta.

Sociology applied to Practical Politics. By John Beattie Crozier, Hon. LL.D. Price 9*s.* net.

Thoughts of a Catholic Anatomist. By Thomas Dwight, M.D., LL.D., Parkman Professor of Anatomy at Harvard. Price 3*s.* 6*d.* net.

LOVELL, JOHN, AND SON, LIMITED, Montreal.

Commission of Conservation, Canada. Second Annual Report, including a Report of the Proceedings of the Second Annual Meeting held at Quebec, Jan. 17th-20th, 1911, and of the Dominion Public Health Conference held at Ottawa, Oct. 12th-13th, 1910. Price not stated.

MACMILLAN AND CO., LIMITED, London.

A System of Medicine. By Many Writers. Edited by Sir Clifford Allbutt, K.C.B., M.A., M.D., LL.D., D.Sc., F.R.C.P., F.R.S., F.L.S., F.S.A., and Humphry Davy Rolleston, M.A., M.D., F.R.C.P. Volume IX. Diseases of the Skin. General Index. Price 25*s.* net.

OUSELEY, JOHN, LIMITED, 6, Fleet-lane, Farringdon-street, London, E.C.

A Traveller's Study of Health and Empire. By Francis Fremantle, County Medical Officer of Health; Author of "A Doctor in Khaki." Price 7*s.* 6*d.* net.

REBMAN, LIMITED, London.

Progressive Medicine. Edited by Hobart Amory Hare, M.D., assisted by Leighton F. Appleman, M.D. Volume II., June, 1911. Price £2 per annum (four volumes), or single copies, 12*s.* net each.

ROCKEFELLER INSTITUTE FOR MEDICAL RESEARCH, Sixty-Sixth Street and Avenue A, New York, U.S.A.

Studies from the Rockefeller Institute for Medical Research. Reprints. Volume XII. Price not stated.

SIMPKIN, MARSHALL, HAMILTON, KENT, AND CO., LIMITED, London.

The Technology of Bread-making, including the Chemistry and Analytical and Practical Testing of Wheat, Flour, and other Materials employed in Bread-making and Confectionery. By William Jago, F.I.C., F.C.S., of Lincoln's Inn, Barrister-at-Law, and William C. Jago, Food Manufacturing Chemist. Price 21*s.* net.

URBAN UND SCHWARZENBERG, Berlin und Wien.

Die Experimentelle Bakteriologie und die Infektionskrankheiten mit besonderer Berücksichtigung der Immunitätslehre. Ein Lehrbuch für Studierende, Aerzte und Medizinalbeamte. Von Dr. W. Kolle, o.ö. Professor der Hygiene und Bakteriologie an der Universität und Direktor des Institutes zur Erforschung der Infektionskrankheiten in Bern, und Dr. H. Hetsch, Stabsarzt in der Medizinalabteilung des Kriegsministeriums in Berlin. Dritte, erweiterte Auflage. Erster Band. Price of the complete work in 2 volumes, paper, M.30 or K.36; bound, M.34 or K.40.80.

WILLIAMS AND NORGATE, London.

Crime and Insanity. By Charles Mercier, M.D., F.R.C.P., F.R.C.S., Physician for Mental Diseases to Charing Cross Hospital; Visitor to the State Inebriate Reformatory. Price, cloth, 1*s.* net.; leather gilt, 2*s.* 6*d.* net.

Health and Disease. By W. Leslie Mackenzie, M.A., M.D., D.P.H., F.R.C.P. Ed., Medical Member of the Local Government Board for Scotland. Price, cloth, 1*s.* net; leather gilt, 2*s.* 6*d.* net.

WOOD, WILLIAM, AND COMPANY, New York.

American Practice of Surgery. A Complete System of the Science and Art of Surgery, by Representative Surgeons of the United States and Canada. Editors: Joseph D. Bryant, M.D., LL.D., Albert H. Buck, M.D., of New York City. Complete in Eight Volumes. Volume VIII. Price per volume $7.

WRIGHT, JOHN, AND SONS, LIMITED, Bristol.

First Aid Charts. By Edward C. B. Ibotson, M.B., B.S. No. 1. Emergencies, Accidents, and Poisoning. No. 2. Fractures, Dislocations, and Sprains. No. 3. Wounds and Hæmorrhage. No. 4. Insensibility or Unconsciousness. Eyeletted and strung for Wall Use. Price 6*d.* each net, or 1*s.* 6*d.* net the set of four.

WRIGHT, JOHN, AND SONS, LIMITED, Bristol. SIMPKIN, MARSHALL, HAMILTON, KENT, AND CO., LIMITED, London.

Some New and Interesting Points in Ships' Hygiene. By W. Melville-Davison, M.B., B.S., Medical Superintendent of the Booth Steamship Company, Limited. Price 4*s.* net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BUNBURY, EDWIN GARRETT, L.R.C.P. Lond., M.R.C.S., has been appointed District Medical Officer by the Helston (Cornwall) Board of Guardians.

EATON, OLIVER, L.R.C.P. Lond., M.R.C.S., D.P.H. Camb., has been appointed Honorary Consulting Surgeon to the Exmouth Cottage Hospital.

HODGSON, JOSEPH WILLOUGHBY, M.D., C.M. Aberd., M.R.C.S., has been appointed Honorary Radiographer to the Exmouth Cottage Hospital.

MACDONALD, R. N., L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Tobermory District of the county of Argyll.

MACNALTY, A. S., M.D., B.Ch. Oxon., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Registrar to the London Hospital.

MARTYN, REGINALD, L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Consulting Surgeon to the Exmouth Cottage Hospital.

MOORE, REGINALD MARK, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health of Malmesbury (Wilts) and District Medical Officer by the Malmesbury Board of Guardians.

NEWSHOLME, H. P., M.B. Oxon., D.P.H., M.R.C.P. Lond., has been appointed Resident Medical Officer at the Brighton Borough Fever Hospital.

TATTERSALL, N., M.B., B.S. Manch., M.B., Ch.B. Lond., has been appointed House Physician at the Brompton Hospital for Consumption.

THORNTON, GEORGE LESTOCK, M.R.C.P. Lond., M.R.C.S., has been appointed Honorary Consulting Surgeon to the Exmouth Cottage Hospital.

VIBET, B. P., M.B. Lond., L.R.C.P. Lond., M.R.C.S., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Bradford, West, District of the county of Yorks, West Riding.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ASHTON-UNDER-LYNE, DISTRICT INFIRMARY AND CHILDREN'S HOSPITAL.—Senior House Surgeon. Salary £120 and fees, with board, residence, and laundry.

BANGOR, CARNARVONSHIRE AND ANGLESEY INFIRMARY.—House Surgeon. Salary £100 per annum, with board, washing, and lodging.

BETHLEM HOSPITAL.—Locum Tenens as House Physician. Salary at rate of 4 guineas a week, with apartments, board, and washing.

BETHNAL GREEN INFIRMARY AND WORKHOUSE, Cambridge Heath, E.—Assistant Medical Officer. Salary at rate of £100 per annum, with board, lodging, and washing.

BRIGHTON, HOVE, AND PRESTON DISPENSARY.—Resident Medical Officer, unmarried. Salary £130 per annum, with board and residence.

BRISTOL GENERAL HOSPITAL.—House Physician for six months. Salary £60, with board, residence, &c.

BUXTON, DERBYSHIRE, DEVONSHIRE HOSPITAL.—Assistant House Surgeon for six months. Salary £70 per annum, with apartments, board, and laundry.

CANTERBURY, KENT AND CANTERBURY HOSPITAL.—House Surgeon and House Physician, both unmarried. Salary in each case £90 per annum, with board, lodging, and washing.

CARLISLE NON-PROVIDENT DISPENSARY.—Resident Medical Officer. Salary £150 per annum, with apartments.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn-road, W.C.—House Surgeon. Salary at rate of £50 per annum, with board and residence.

CHELTENHAM EYE, EAR, AND THROAT FREE HOSPITAL.—Assistant Surgeon. Salary £200 per annum.

CITY OF LONDON LYING-IN HOSPITAL, City-road, E.C.—Resident Medical Officer for six or four months. Salary at rate of £50 per annum, with board, lodging, and washing.

COLCHESTER, ESSEX COUNTY HOSPITAL.—House Surgeon and House Physician. Salary in each case £80 per annum, with board, residence, and washing.

CROSSLEY SANATORIUM, Delamere Forest, Cheshire.—Assistant Medical Officer. Salary £100 per annum, with board, apartments, and laundry.

CROYDON GENERAL HOSPITAL.—Senior and Junior House Surgeons. Salaries £105 and £60 respectively, with board, laundry, and residence.

DEVONPORT, ROYAL ALBERT HOSPITAL.—Assistant House Surgeon for six months, unmarried. Salary at rate of £50 per annum, with board, apartments, and laundry.

DUDLEY, GUEST HOSPITAL.—Assistant House Surgeon for six months. Salary £75 per annum, with residence, board, and washing.

GLASGOW WESTERN INFIRMARY NEW CLINICAL LABORATORY.—Lecturer on Clinical Methods. Salary £400 per annum.

GLOUCESTER GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION.—Assistant House Surgeon for six months. Salary at rate of £80 per annum, with board, residence, and washing.

GUILDFORD, ROYAL SURREY COUNTY HOSPITAL.—House Surgeon. Salary £100 per annum, with board, residence, and laundry. Also Assistant House Surgeon. Salary £75 per annum, with board, residence, and laundry.

HALIFAX, ROYAL HALIFAX INFIRMARY.—Senior House Surgeon, unmarried. Salary £120 per annum, with residence, board, and washing.

HARTLEPOOLS HOSPITAL.—House Surgeon. Salary £100 per annum, with board, washing, and lodging.

HEMEL HEMPSTEAD, HERTS, WEST HERTS HOSPITAL.—Resident Medical Officer. Salary £100 per annum, with rooms, board, and washing.

HOSPITAL FOR WOMEN, Soho-square, W.—Resident Medical Officer for six months. Salary at rate of £80 per annum.

LONDON COUNTY COUNCIL.—Medical Officer of Health of the County of London. Salary £1250 a year and travelling expenses.

LONDON HOSPITAL DENTAL SCHOOL.—Two Demonstrators, House Surgeon, and Instructor in Dental Mechanics.

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN, Park-place, Cheetham Hill-road.—House Surgeon. Salary £80 per annum, with apartments and board.

MANCHESTER, ST. MARY'S HOSPITALS FOR WOMEN AND CHILDREN.—Two House Surgeons. Salary at rate of £50 per annum, with board and residence.

MIDDLESEX HOSPITAL, W.—Surgeon Also Assistant Surgeon.

NEWCASTLE-UPON-TYNE CITY ASYLUM, Gosforth.—Junior Assistant Medical Officer, unmarried. Salary £140 per annum, with apartments, board, and laundry.

NEWCASTLE-UPON-TYNE DISPENSARY.—Visiting Medical Assistant. Salary £160 per annum.

NORTHAMPTON GENERAL HOSPITAL.—House Surgeon, unmarried. Salary £90 a year, with apartments, board, washing, and attendance.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon, unmarried. Salary £160 per annum, with apartments, attendance, &c.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House Surgeon. Salary at rate of £100 per annum, with board, lodging, and washing.

ORKNEY, PARISH OF ROUSAY AND EGILSHAY.—Resident Medical Officer. Salary £71 per annum.

OXFORD, RADCLIFFE INFIRMARY AND COUNTY HOSPITAL.—Casualty House Surgeon, unmarried, for six months. Salary at rate of £80 per annum, with board, &c.

PLYMOUTH, SOUTH DEVON AND EAST CORNWALL HOSPITAL.—House Physician for six months. Salary £75 per annum, with board, residence, and washing.

PORTSMOUTH BOROUGH ASYLUM.—Assistant Medical Officer, unmarried. Salary £150 per annum, with board, lodging, and washing.

QUEEN CHARLOTTE'S LYING IN HOSPITAL, Marylebone-road, N.W.—Assistant Resident Medical Officer for four months. Salary at rate of £50 per annum, with board, residence, and washing.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, N.E.—House Surgeon for six months. Salary at rate of £80 per annum, with board, residence, and washing.

ROBBEN ISLAND, LEPER WARDS, Cape of Good Hope.—Junior Medical Officer. Salary £250 per annum, with free quarters and two rations.

ROCHESTER, SAINT BARTHOLOMEW'S HOSPITAL.—House Physician. Salary £110, with board and residence.

RYDE, ROYAL ISLE OF WIGHT COUNTY HOSPITAL.—Resident House Surgeon, unmarried. Salary £125 per annum.

ST. PETER'S HOSPITAL FOR STONE, &c., Henrietta-street, Covent Garden, W.C.—Junior House Surgeon for six months. Salary at rate of £50 per annum, with board, lodging, and washing.

SHEFFIELD ROYAL HOSPITAL.—Assistant House Surgeon and Assistant House Physician, unmarried. Salary £60 each per annum, with board, lodging, and washing.

SHEFFIELD, UNIVERSITY OF.—Junior Demonstrator in Pathology. Salary £150 per annum.

SOUTHAMPTON, ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—House Physician. Salary £100 per annum, with rooms, board, and washing.

SOUTHPORT INFIRMARY.—Resident Junior House and Visiting Surgeon, unmarried, for six months. Salary £70 per annum, with residence, board, and washing.

SOUTH SHIELDS, INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Junior House Surgeon. Salary £90 per annum, with residence, board, and washing.

TAUNTON AND SOMERSET HOSPITAL.—Resident Assistant House Surgeon for six months. Salary at rate of £70 per annum, with board, lodging, and laundry.

TAUNTON, SOMERSET AND BATH ASYLUM, Cotford.—Assistant Medical Officer, unmarried. Salary £140 per annum, with apartments, board, laundry, &c.

WARRINGTON INFIRMARY AND DISPENSARY.—Junior House Surgeon. Salary at rate of £100 per annum, with board, lodging, and laundry.

WEST HAM AND EASTERN GENERAL HOSPITAL, Stratford, E.—Junior House Physician. Salary £75 per annum.

WEST HARTLEPOOL, CAMERON HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board, rooms, and washing.

WEST LONDON SCHOOL DISTRICT, Park School, Hanwell.—Medical Officer (non-resident). Salary at rate of £150 per annum.

WIGAN, ROYAL ALBERT EDWARD INFIRMARY.—Senior House Surgeon. Salary £120 per annum, with board, washing, and apartments.

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY.—House Surgeon. Salary £80 per annum, with apartments, board, and laundry.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies for Certifying Surgeons under the Factory and Workshop Act at Matlock, in the county of Derby; at Killaloe, in the county of Clare; and at Charlbury, in the county of Oxford.

Births, Marriages, and Deaths.

BIRTHS.

RIX.—On August 3rd, at Dennington Park-road, West Hampstead, the wife of F. W. Rix, M.B., of a son.

ROOKE.—On August 2nd, at Fairfield, North Finchley, N., the wife of W. Stanley Rooke, M.R.C.S., L.R.C.P., of a daughter.

MARRIAGES.

HORNER—FEARON.—On August 4th, at St. Luke's, Redcliffe-square, S.W., Norman Gerald Horner, B.A., M.B., B.C. Cantab., only son of the late Arthur Claypon Horner, M.R.C.S., of Tonbridge, to Grace Malleson, younger daughter of Walter Malleson Fearon, of Newquay, Cornwall.

DEATHS.

GEE.—On August 3rd, suddenly, at Keswick, Samuel Jones Gee, M.D. Lond., F.R.C.P., in his 72nd year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE FRENCH LAW ON THE MANUFACTURE OF SERUMS, TOXINS, ETC.

A DECISION has been given by the Paris Supreme Court which may have an important bearing on the modern developments of medical practice. A law that bears the date of April 25th, 1895, deals with attenuated virus, therapeutic serums, modified toxins that may be used for the prevention or cure of disease, and all organic substances that can be injected and cannot be chemically defined but are used in the treatment of disease. Such products must not be sold unless both from the point of view of their origin and manufacture they have been authorised by the Government, and this authorisation is only to be given after approval received from the Consultative Committee of Public Hygiene and the Academy of Medicine. The penalty for infringing this law is a minimum fine of £2 and from 3 to 12 months' imprisonment.

The question now arises whether this law can be applied against a medical practitioner who invents a serum and gives doses of this serum to his patients. The difficulty is due to the employment of the word *débitées* in the text of the law. We derive our English word debit from this term, and it is generally taken to mean selling; thus a *débit de tabac* is the shop where tobacco is sold, but the term may also apply to the giving of things out without payment. A spring may "*debit*" or give out so many gallons of water per hour. Last year Dr. Lorot was summoned before the Second Correctional Chamber and accused of giving his patients subcutaneous injections of an anti-tuberculous serum he had himself manufactured. The Tribunal concluded that there was no *débit* and acquitted Dr. Lorot. The Public Prosecutor, however, appealed against this decision but the first verdict was confirmed. The case was now carried *en cassation*—that is, before the Supreme Court—and here the two previous verdicts were revoked and Dr. Lorot condemned. In vain it was pleaded that the serum was not sold, that it was not placed at the disposal of the general public. The view was taken that whatever the meaning of the word *débit* might be, the obvious intention of the law was to prevent the injection of serums, toxins, and such substances into the bodies of patients unless their manufacture had been properly controlled by other competent authorities than the manufacturer, even if the latter should prove to be a qualified practitioner.

HOSPITAL OUT-PATIENTS AND THE INSURANCE BILL.

To the Editor of THE LANCET.

SIR,—One point seems to have been overlooked in regard to the expected decrease of out-patients and the consequent lessened cost to the hospitals. It is that the falling off in numbers will be amongst hose costing least, the patients who receive advice and medicine only. Those coming up frequently for the most expensive treatment by electricity and massage, X rays, Finsen light, &c., cannot possibly be taken over at contract price by the general practitioner, who has neither the time nor, as a rule, the installations and apparatus for such work. Minor operations, dental and surgical cases, of which there are a vast number needing the services of an anæsthetist and the expense of an anæsthetic, and the innumerable cases of ulcerated legs and septic fingers—all these will come to the out-patient department as they always have done. We shall lose the chronic and the trivial medical cases, that is all, and the expensive ones will remain. I enclose my card.

I am, Sir, yours faithfully,

August 9th, 1911. MATRON.

Ethelinda.—The book alluded to seems to be complete rubbish. By real inhalation the effects are fully obtained, and concerning these our previous reply holds good.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

WE shall publish this diary from time to time that our readers may have under their hands the dates of the approaching scientific Congresses. It is unnecessary to issue the lists of all these functions week by week, and we propose to make only such gatherings as will occur in the immediate future the subject of regular announcement. The following Congresses, Conferences, and Exhibitions are announced for August and September, 1911:—

April–October.—Rome Exhibition (United Italy's Jubilee).
,, 29th–Oct. 26th (Turin).—International Exhibition.
May 3rd–Oct. 31st (Glasgow).—Scottish Exhibition.
,, 6th–Oct. 31st (Dresden).—International Hygiene Exhibition (British Section opens June 14th).
May 12th–Oct. 31st (London, Crystal Palace).—Festival of Empire Imperial Exhibition. (Profits to King Edward VII. Hospital Fund.)
May 18th–October 31st (London, Shepherd's Bush).—Coronation Exhibition.
,, 19th–Oct. 31st (London).—Earl's Court Exhibition.
June 1st–August 31st (Squirrels Heath, Romford).—Town Planning and Modern House and Cottage Exhibition.
August 12th–18th (Brussels).—First International Congress on Child Study.
,, 12th–30th.—E.M.I. (Enseignement Médico-mutuel International) Tour in Scandinavia.
,, 15th–21st (Dublin).—Royal Institute of Public Health.
,, 21st–23rd (Larvik).—Fourteenth Norwegian Physicians' Congress.
,, 28th–Sept. 11th (South-East of France).—Eleventh "Voyage d'Etudes Médicales."
,, 30th–Sept. 2nd (Berlin).—Third International Laryngo-Rhinological Congress.
,, 30th–Sept. 6th (Portsmouth).—British Association.
,, 31st and Sept. 1st (Vancouver).—Thirteenth Annual Meeting of the British Columbia Medical Association.
Sept. 4th–9th (Yarmouth).—Sanitary Inspectors' Association. Annual Conference.
,, 5th–7th (Philadelphia).—American Electro-therapeutic Association.
,, 9th–11th (Ostend).—Fifteenth Flemish Nature and Medical Congress.
,, 11th–13th (Vienna).—German Urological Society.
,, 11th–15th (Berlin).—Third International Conference on Infantile Mortality (*Goulles de Lait*).
,, 11th–16th (The Hague).—Thirteenth International Congress on Alcoholism.
,, 12th–15th.—Celebration of the 500th Anniversary of the Foundation of the University of St. Andrews.
,, 18th–23rd (Sydney).—Australasian Medical Congress.
,, 18th–23rd (Paris).—International Conferences of Genetics.
,, 23rd–Oct. 21st (London, Olympia).—Electrical Exhibition.
,, 24th–30th (Karlsruhe).—Eighty-third Meeting of German Physicists and Physicians.
,, 26th–28th (Louisville, Ky.).—American Association of Obstetricians and Gynecologists.
,, 26th–30th (Brussels).—Third Congress of the International Society of Surgery and Exhibition of Fractures.
,, 28th–30th (Dresden).—International Congress for the Protection of Mothers and Sexual Reform.
,, 29th (Edinburgh).—Association of Veterinary Officers of Health. Annual Meeting.
September (Genoa).—International Exhibition Marine Hygiene.
,, (Turin).—Congress of the Association of Italian Railway Physicians.
,, (London).—Bakers' and Confectioners' Exhibition
,, (Manchester).—Second Conference of the British Hospitals Association.
September–November (Antwerp).—International Exhibition of Alimentation, Brewing, Wines, and Liqueurs.

Medical Diary for the ensuing Week.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. Dr. Simson: Diseases of Women. 12 noon, Dr. Bernstein: Pathological Demonstration. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye.

TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Mr. Pardoe: Stricture of the Urethra.

WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 12.15 P.M., Lecture:—Dr. Bernstein: Clinical Pathology. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. 2.30 P.M., Dr. Simson: Diseases of Women. 5 P.M., Lecture:—Mr. Addison: Clinical.

THURSDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye.

FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. Dr. Simson: Gynæcological Demonstration. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. Davis: Diseases of the Throat, Nose, and Ear.

SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Medical Registrar: Demonstration of Cases in Wards. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. B. Harman: Diseases of the Eye. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

LONDON HOSPITAL MEDICAL COLLEGE (UNIVERSITY OF LONDON), Clinical Theatre, London Hospital, Mile End-road, E.

MONDAY.—2 P.M., Demonstration in Clinical Medicine:—Dr. Wall: Pulmonary Diseases.

TUESDAY.—2 P.M., Demonstration in Clinical Medicine:—Dr. Grünbaum: Diseases giving rise to Morbid Renal Excretion.

WEDNESDAY.—2 P.M., Demonstration in Clinical Medicine:—Dr. Hutchison: Abdominal Disease.

THURSDAY.—2 P.M., Demonstration in Clinical Medicine:—Dr. Head: Diseases of the Nervous System.

FRIDAY.—2 P.M., Demonstration in Clinical Medicine:—Dr. L. Smith: Diseases of the Heart.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (7th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor 9 A.M., Major 2 P.M.).

TUESDAY (8th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London, (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.). Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.), Royal National Orthopædic (9.30 A.M. and 4 P.M.).

WEDNESDAY (9th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (10th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal National Orthopædic (9 A.M. and 3.30 P.M.), Royal Ear (2 P.M.), Children Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

FRIDAY (11th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Royal National Orthopædic (3.30 P.M.), Soho-square (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.)., Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

SATURDAY (12th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic (2 P.M.), Hospital operations are performed daily.

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THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. I. of 1911, which was completed with the issue of June 24th, were given in THE LANCET of July 1st.

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METEOROLOGICAL READINGS.

(Taken daily at 12 noon by Steward's Instruments.)

THE LANCET Office, August 9th, 1911.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain fall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Aug. 3	30·07	S.	...	119	74	63	62	69	Cloudy
" 4	30·02	W.	...	129	78	60	61	66	Cloudy
" 5	29·88	S.	...	117	74	63	64	69	Fine
" 6	29·95	S.W.	...	120	73	57	61	65	Cloudy
" 7	30·18	S.W.	...	131	81	55	60	64	Fine
" 8	30·23	S.	...	130	88	60	63	70	Fine
" 9	30·06	S.E.	...	123	92	68	69	75	Fine

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Archives of the Roentgen Ray, La Clinique Ophtalmologique, Journal of Mental Science, Annales de Gynécologie et d'Obstétrique, Edinburgh Medical Journal, Medical Review, Canadian Journal of Surgery, Public Health, Chirurgia, Albany Medical Annals, Pharmaceutical Journal, Clinical Medicine, Monthly Cyclopædia, American Journal of Medical Sciences, Military Surgeon, Royal Army Medical Corps Journal, Revue de Psychiatrie, Journal of the Royal Institute of Public Health, Indian Public Health.

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Quarter Page, £1 10*s.* Half a Page, £2 15*s.* An Entire Page, £5 5*s.*
Special terms for Position Pages.

An original and novel feature of "THE LANCET General Advertiser" is a Special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice but is in itself an *additional* advertisement.

Advertisements (to insure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials, &c., sent to the Office in reply to advertisements; copies only should be forwarded.

Cheques and Post Office Orders (crossed "London County and Westminster Bank, Covent Garden Branch") should be made payable to the Manager, Mr. CHARLES GOOD, THE LANCET Office, 423, Strand, London, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Sole Agents for Advertising in Germany, Austria, Hungary Switzerland and the French and Italian Riviera—RUDOLF MOSSE, Berlin. S.W., and all Branches.

Agent for the Advertisement Department in France—J. ASTIER, 35, Rue Franklin, Asnières, Paris.